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The attention of every reader of the paper is particularly directed to the *BUYER'S GUIDE* on pages 3, 4, 6, 8, 10, 12, 13 and 14 and to the *ALPHABETICAL INDEX* of Advertisers on page 15.

At the present time buyers in every part of the world are no doubt interested in establishing new connections for the purchase of lines cut off by the European war and it is recommended that this Buyer's Guide be retained for reference as it contains a classified list of several hundred articles, together with the names of manufacturers or exporters from whom they may be obtained.

Correspondence regarding any topic of international trade interest is invited from readers of the Review and contributions on such subjects, if available for publication, will be paid for at space rates. Photographs of commercial scenes will be purchased, if suitable for reproduction. Manuscripts and photographs not used will be returned promptly if postage is sent for that purpose.

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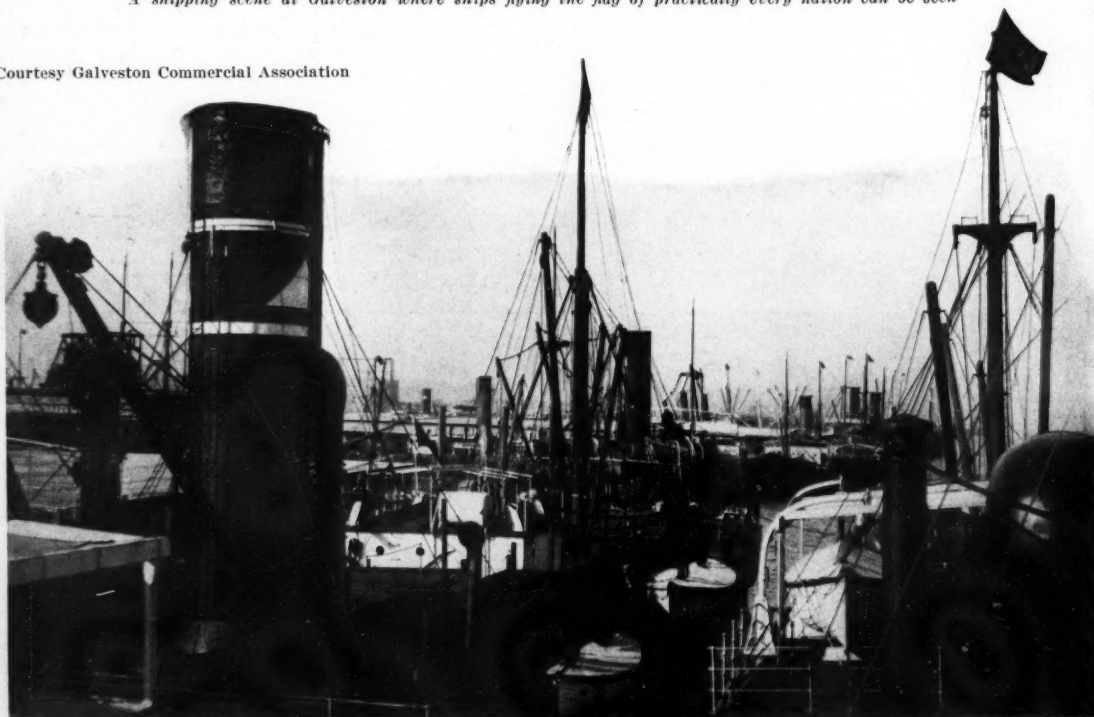
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A shipping scene at Galveston where ships flying the flag of practically every nation can be seen

Courtesy Galveston Commercial Association





Courtesy Galveston Commercial Association

Ships berthed at Galveston awaiting cargo. Galveston ranks next to New York in the total of exports, consisting principally of cotton and wheat, the latter having increased nearly fifteen-fold since September. It is also a great gateway for imports from Mexico, Cuba and Central America

WHAT AMERICA IS SELLING AND BUYING

Important Changes in the Totals of Various Exports and Imports since the War Began—The Shipping Situation

THE exports and imports of the United States have been, for many years, among the most important factors of international trade. They have become even more so since nearly half the world went to war. Upon America

now depends, in a great measure, the supplying of the immediate requirements of all the countries whose industries have been interrupted or dislocated by the conflict. What the United States is selling, what it is buying,

Cotton on wharf at Galveston awaiting shipment. Galveston's facilities are growing rapidly, but sometimes, owing to a rush of traffic, it is necessary to place cotton in the open. Docks are being improved so that next season cotton can be handled direct from the cars to the ships

Courtesy Galveston Commercial Association





Old clipper ships that have not spread their sails on blue water for years are being pressed into the cotton and grain carrying trade

and how deliveries are being made overseas are therefore of interest to manufacturers and merchants abroad because all are more or less directly concerned.

American exports in February increased about \$100,000,000 over those of any previous February, while the imports fell \$23,000,000 below what they were the previous year. The effect of both changes was to give the foreign trade of the United States an excess of exports over imports, on merchandise movement alone, of \$173,604,336, against \$25,375,369 in February, 1914. The maximum foreign credit previously was \$83,004,381. The exports from the port of New York, for February, 1915, reached the grand total of \$109,493,487, a gain of \$45,882,645 over the corresponding month of the year before. The extra-

ordinary increase in exports from all ports of the United States reflects particularly the unprecedented buying of foodstuffs, clothing and military supplies by the Allies, and foodstuffs by neutral countries.

The February statistics of imports through New York City show a total of \$71,016,866, which is a decline of more than \$12,000,000 in comparison with the same month in 1914, which gives some indication of the increasing difficulty in getting merchandise out of the belligerent countries and across the seas, which is largely due to the curtailment of both land and sea transportation abroad owing to military operations.

The American exports to England were more than doubled in comparison with February, 1914, while those to France were four times as great. Italy's purchases of wheat, horses, motor cars and other supplies reached the high total of \$11,962,398, as against \$2,084,252 the same month last year. The exports through New York to Denmark in February were \$3,910,359; to Sweden, \$3,780,133, and to Norway, \$3,007,042. In February, 1914, the exports were valued respectively at \$202,079; \$271,101, and \$207,193. There was a heavy drop in last February's exports to European Russia, as compared with those of the same month last year, but shipments to Russia in Asia rose from \$36,523, in February, 1914, to \$449,951.

New York's exports to Germany, including cotton, were \$1,412,376, against \$6,384,088 in February, 1914. Nothing was exported to Austria-Hungary. Imports from Germany were \$4,854,556, compared with \$8,504,049 in February of last year. Austrian and Hungarian merchandise received in New York last February aggregated \$644,338, while a year ago the total value was \$1,294,485.

The scope of the relief work being done in this country for Belgium is indicated by the February, 1915, exports from New York to that stricken land. They were valued at \$1,393,530. A year ago, under the normal conditions of peace, they amounted to \$1,507,513.

Of the belligerent countries, England showed the smallest falling off in exports to the United States by way of New York—\$11,624,098, as compared with \$14,104,721, in February, 1914. American imports from France were \$4,714,763, a little more than half what they were a year ago. Imports from Russia were \$46,652, as against \$494,474 in February, 1914. Italian and Turkish imports increased, Italy's entries aggregating \$2,937,170—a gain of about \$400,000, while Turkey's reached \$1,125,516, compared with \$387,406 in the same month last year. Imports from the Netherlands were about \$300,000 less than a year ago.

One of the great coal piers at Norfolk, Virginia, which has a capacity of 40,000,000 tons annually. Norfolk is one of the largest coaling stations in the world, and is also an important shipping point for cotton and grain. Its coal handling equipment is modern and efficient, the cars unloading directly into the ships

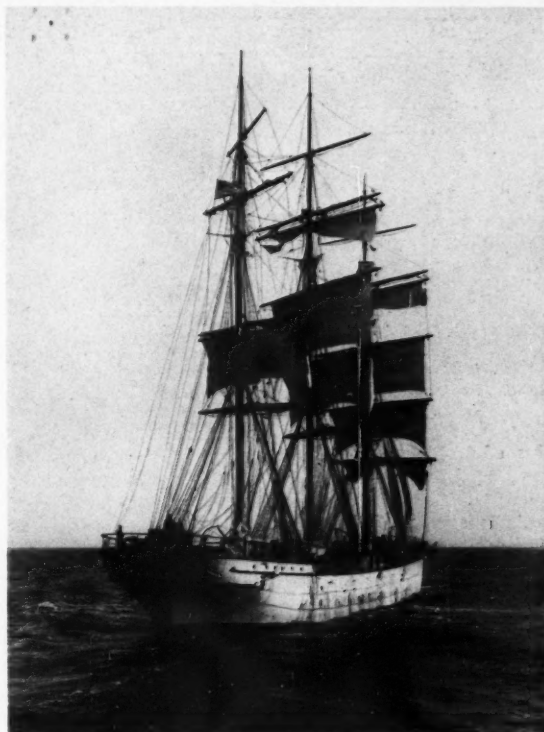


Imports from South America increased. From Brazil, in February, 1915, they reached the high value of \$6,704,886, or about \$900,000 more than in February, 1914. The imports from the Argentine were \$4,404,218, as against \$3,290,874 the same month last year. Imports from Chile were \$1,603,751, an increase of nearly 100 per cent. Those from Colombia, Ecuador and Venezuela also showed increases. Those from Asia, Africa and Oceania declined heavily.

These figures show the general course of the total buying and selling movements of merchandise and materials. Even more interesting, however, are the kinds of goods affected by the great changes that have taken place in international demand and supply. In the seven months beginning last July and ending last January, the latest period for which detailed statistics are available, the United States exported horses to the value of \$23,352,276, as compared with \$1,653,458 in the same period in 1914. The increase in the exports of breadstuffs was also striking: corn, \$12,332,627, as against \$3,832,810, and wheat, \$191,399,383, compared with \$63,807,377. The principal buyers of corn were the Netherlands and Canada, and of wheat, France, Italy, the Netherlands, United Kingdom and Canada. In wheat flour the exports of \$48,000,000 in value represented a gain of about \$14,000,000. The United Kingdom and the countries of Continental Europe were the largest buyers.

The exports of automobiles from the United States have increased heavily each year of late. For the seven months period in question they were \$16,797,541 in value, as compared with \$13,254,854 a 12-month previous. France was the heaviest buyer—more than \$5,000,000 worth, as compared with \$361,803 the year before. The United Kingdom's purchases amounted to \$4,758,702, as against \$2,805,325 previously. These two countries took about 5,500 motor cars. American exports of railway passenger and freight cars fell to almost one-fourth of what they had been, while the value of wagons exported rose about 50 per cent.

Machinery of all sorts, structural steel, rails, sheets and plates, etc., also show heavy declines in the export list, but sole leather to the extent of nearly \$12,000,000 in value was exported to the United Kingdom—about three times as much as usual. Meat and dairy products, as a rule, are being exported in less volume than ordinarily, although there is an increase of about 40 per cent. in the value of the oil cake and oil cake meal sent abroad. The exports of illuminating oil were about \$13,000,000 less

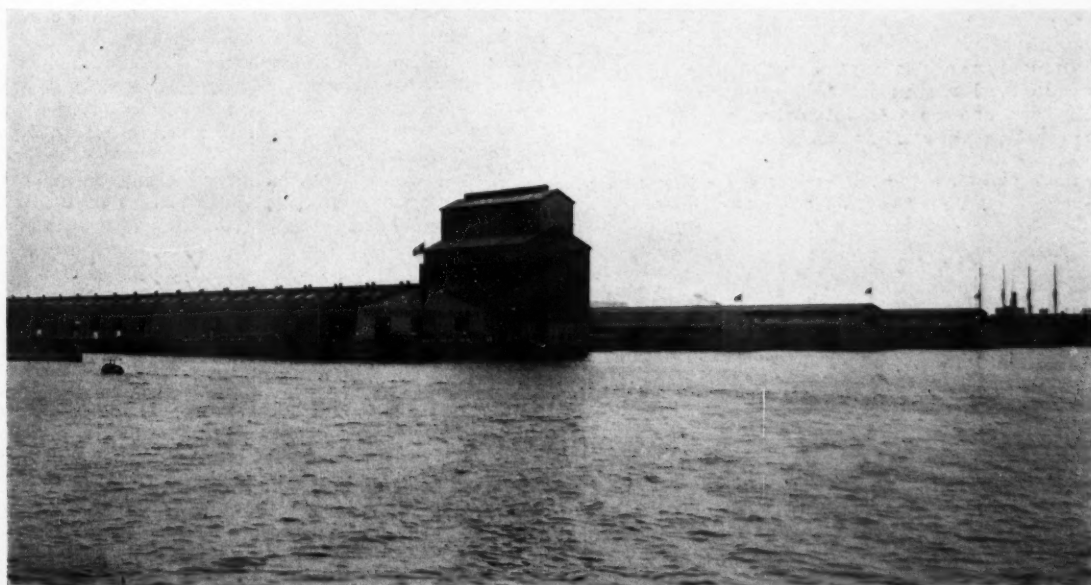


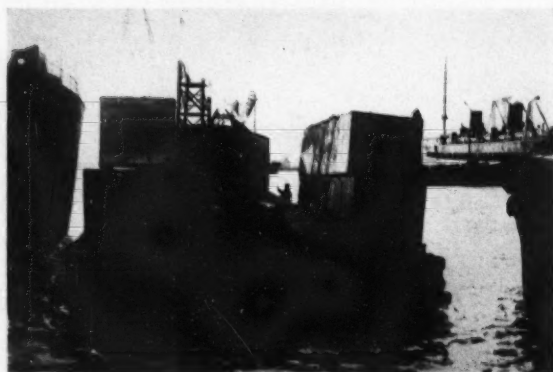
Clipper ship outward bound with a cargo for Europe. The shortage of steamers has brought sails again to the deep sea

than in the corresponding seven months ending with January, 1914.

On the import side, comparing the two seven-month periods, the United States bought art works to the value of \$6,466,000 from France, as against \$19,409,000 formerly. The imports of coffee and cocoa also declined, but only about 20 per cent. Imports of laces, edgings and embroideries—from France, Germany, Switzerland and the United Kingdom—dropped 50 per cent. Hides and skins (except fur skins) used to come principally from Germany, the Netherlands and Russia in Europe. The American purchases have fallen from nearly \$15,000,000 to a little more than \$6,000,000. Uncut diamonds to the

A view of some of the great railroad piers that are a part of Baltimore's miles of dock facilities. This port has an important trade with Europe, as well as with all of Central and South America. More than 2,000 vessels annually pass in and out of the harbor in foreign and coastwise traffic





Unloading American automobiles from a steamship at Havre. Some are shipped boxed; others between decks

value of \$5,768,000 were imported in the seven months a year ago. In the latest seven months the total was only \$1,070,691. The United Kingdom supplied four-fifths of the American purchases. Belgium was the principal exporter to America of cut diamonds, sending nearly \$5,000,000 worth a year ago. Less than one-fifth that much was sold to the United States in the seven month period that is being contrasted. The exports of cut diamonds from the Netherlands were \$3,848,512, and have fallen to almost exactly half that amount. Imports of tobacco, principally from Turkey in Asia, have decreased more than 50 per cent. Imports of wool, woolen cloths and dress goods have increased. The principal supplier of these items is the United Kingdom.

From the nature of the foregoing items some idea may be gathered of the great changes that are taking place in the principal commercial countries of the world. Some industries have expanded, while others have been much diminished. As a rule, nations and individuals seem to be living more economically than they were a year ago. While there can be no economy possible in expenditures for war materials, of course, frugality is automatically enforced on those individuals of belligerent countries not actively engaged in the conflict, and it is being practiced all over the world in a greater degree than usual. This has always been remarked as one of the effects of war, and owing to the vastness of the present struggle its influence is more widespread than it ever has been before. This spirit of economy—or, at least, the curtailment of luxuries—is evidenced by the character and volume of national imports.

Another effect of the war is the temporary shifting of trading centers—changes that may in some instances become permanent. Statistically New York City is the world's greatest seaport, but as a market for commodities and merchandise it has hitherto been surpassed by London, Hamburg and one or two European cities of far less population. In the last six months, however, New York has become more and more an international trading center where great quantities of commodities and manufactured

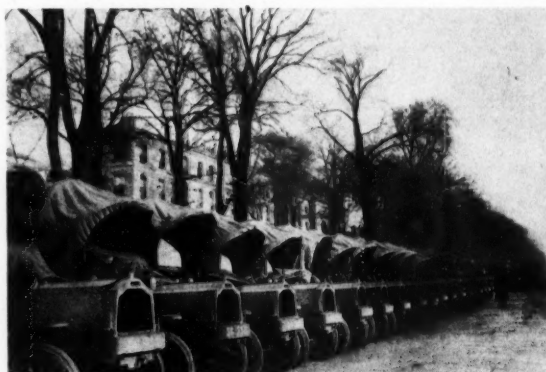
Motor trucks from the United States landed on the dock at Havre, being made ready for military use



goods have been brought together from all parts of the world to be redistributed over seas. It is beginning to become a world market like London for raw materials and one like Hamburg for the distribution of manufactured goods. More and more merchants from other nations are coming to New York to purchase their needs, and the financial, trading and transportation facilities of the port are being rapidly enlarged. With the impetus that the recent great changes in international trade have given, there seems every reason to believe that New York will eventually become established as a world market place second only to London.

The first three months of the present year showed a trade balance in favor of the United States of about \$400,000,000. It therefore seems probable that, at a similar rate of increase, this trade balance will be about a billion dollars by the end of 1915. This, in itself, will do much to enhance and still further establish New York's importance as a great clearing center for international trade, owing to the necessity of financing exchanges and aiding the general trade movement that has its origin at that port.

The congestion of shipping and delay in loading and unloading continue at certain ports abroad, owing to a shortage in dock labor in most instances. In other places there is a shortage of railway cars for the transport of cargoes to their inland destinations. These conditions are more acute in the countries at war than elsewhere.



American motor trucks, to be used for military transports in France, lined up in a street of Havre ready to start for the front

A scarcity of tonnage continues to prevail almost everywhere in the world. In Norway, for example, almost every craft capable of keeping afloat, it is said, is now being snapped up for the transporting of merchandise. Sailing vessels are coming into vogue again, and many of these are being fitted with auxiliary Diesel motors.

The principal lines plying between England and India and South Africa recently advanced their rates to take effect from March 1. On maize from South Africa this advance is reported to be from an equivalent of \$2.43 per ton to \$7.30 a ton.

In consequence of these conditions the shipyards all over the world are unusually busy. In Japan, for example, one company alone has 12 vessels, averaging 7,500 tons each, under construction. Some of these boats will run from Yokohama to London, via Suez, thence to New York, and from there, via Panama, to their home port, thus completing their journey around the world.

In British shipyards, using as the unit of value the ton deadweight, the latest quotations for the construction of new vessels is equal to \$42.50 a ton for cargo steamers of about 7,000 tons deadweight and \$45 per ton for vessels of smaller capacity, for delivery six to eighteen months hence.

The Liverpool correspondent of the *Shipping and Mercantile Gazette* (London) points out that the popular idea that all shipowners are making money at present is erroneous. Not a few owners, he says, have boats just coming off time charters at rates that have barely covered expenses. Still others have their boats on unexpired time charters at less than half the rates now prevailing.

THE PROFITS AND ECONOMIES OF TRACTOR FARMING

Better Tillage and Larger Crops are Possible, and
the Tractor's Other Uses are Many and Varied

THREE things are essential for the production of large crops. The first is proper tillage of the soil. Good seed is another factor, and favorable climatic conditions the third. Soil and seed are absolutely within the control of the farmer. He cannot command the weather, but he can overcome its adverse influences to a certain extent by preparing the ground so that the moisture can be conserved and the effects of drought be diminished.

It is now generally acknowledged that proper tillage is the most important of these three vital elements of successful agriculture, and that the improvements in methods of tillage within recent years

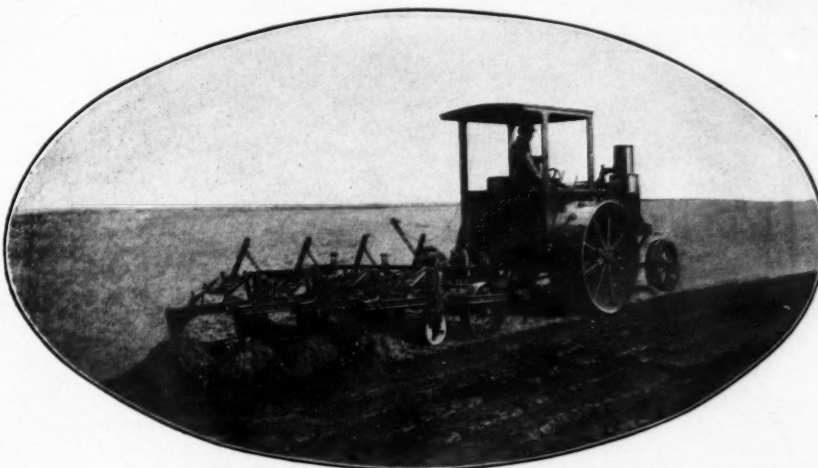
have done more towards securing large yields than the advances in the selection of seed and in the science of fertilization. Wonderful results have everywhere repaid the farmer who has tilled the soil scientifically. Simply by plowing earlier and deeper the products per acre have been doubled. Also this stirring up of the rich subsoil has been found to be less expensive, in most cases, than the use of fertilizers.

Mechanical power is the basis of this revolution in farming methods, both in the preparation of the ground for the crop and its harvesting. One reason for this is that every kind of farm work, to be most effective, must be done not only at the proper time, but in the least time possible. The right implements, used at the right time, are necessary for the best results. With animal power the big farm tasks are performed slowly and laboriously. The spring plowing has to be done when the horses are in their poorest condition for work. Harvesting lags because of the heat of

that season of the year which exhausts men and beasts. Yet both of these operations must be hurried in order to utilize every day and hour of favorable weather. With horses the farmer is a slave to the weather. With a tractor he is able, in no small degree, to have domination over it.

Proper plowing is the only method of tilling the soil that

will produce the best results. Good plowing means deep plowing. This provides a larger root bed, and makes possible a more prolific growth. It also provides a larger amount of fresh fertilizing material by making new food supplies available from the new earth that is brought under cultivation. It is additionally of great import-



Courtesy Avery Company

With this Avery 12-25 horsepower tractor, the farmer is independent of the seasons—it is here shown attached to a four-bottom "self lift" plow that can be used for many kinds of farm work

ance because it furnishes a larger reservoir for the necessary water supply of the plant, thus enabling it to withstand a much longer season without rain.

The tractor puts all this, and more, within the reach of the farmer. A tractor will do the plowing. It will furnish the power required to operate other machines that can do a vast amount of farm work. It will haul the harvesters over the grain fields, thresh the grain, pull the loaded wagons to market, and, when not otherwise employed, can be set to sawing wood and doing all sorts of odd jobs that have made farm life an incessant round of back-breaking drudgery.

A tractor will take the place of eight or ten horses. It will not do absolutely everything, however, that these horses did. It is not likely that the farm horse ever will be entirely displaced, for many things can still be done with a team more cheaply than with a tractor.

When a tractor is idle it costs nothing except the interest on the investment. A tractor that will do the work of so

These two illustrations show a "Little Genius" engine gang plow in the field, drawn by a Waterloo tractor. This is a two or three bottom plow with an automatic power lift, enabling the operator to raise or lower the bottoms by pulling a rope. It is specially designed for small tractors

Courtesy Parlin & Orendorff Co.



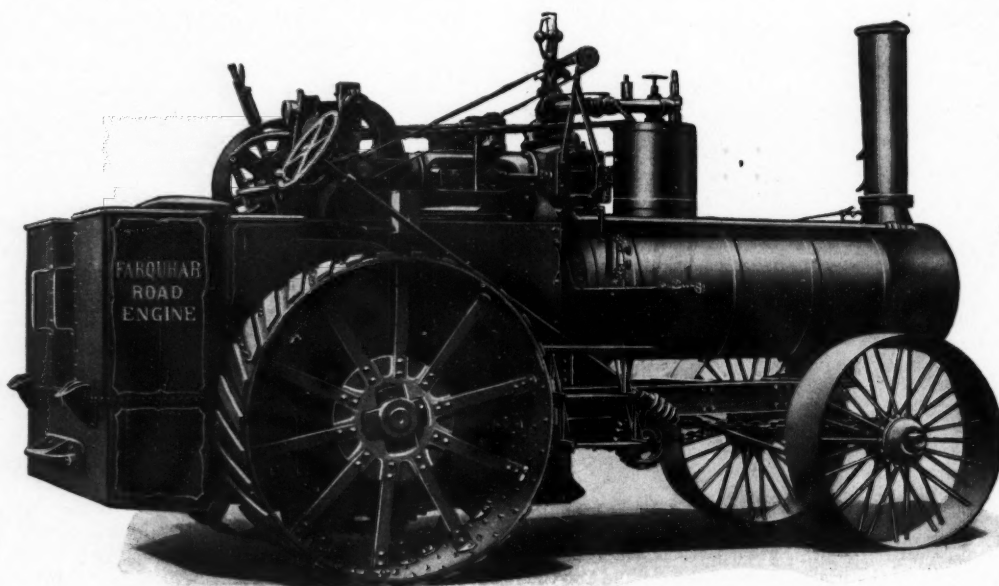
many horses costs not much more than they do in the first instance, but horses have to be fed whether they work or not, and, given the same care, a good tractor will last as long as a good horse.

The operating expense of a tractor, as compared to horses or mules, is a question of the relative cost of fuel and feed. Careful records have been kept in order to determine the exact yearly cost of feeding a horse. Such records were published by the United States Department of Agriculture some years ago. Using these authoritative figures and correcting the prices of feed to those prevailing at present in the United States, the average cost of feeding a farm horse is \$77 a year. It has been shown, further, that the average horse works only about 100 days out of 365, which means that it must be fed during 265 idle days.

The average amount of fuel used per day varies so greatly with the classes of work which are done and with the size of the tractor that is being used that it is somewhat difficult to make any general average comparison.

fuel cost of an 8 h.p. tractor, against the cost of feeding four horses the 12 h.p. against 6 horses, the 20 h.p. against 10, the 25 against 12 and the 40 against 20, the comparative costs of fuel vs. feed would be \$90 against \$308; \$135 against \$462; \$225 against \$770; \$279 against \$924, and \$450 against \$1,540.

Comparing the cost of wages and board of hired help in using tractors, as against horses or mules, considering a tractor as replacing one-half as many surplus horses as its rated horsepower and allowing four horses to a driver, it has been found that with a 12 h.p. tractor one operator will do the work of two men using animal power. With a 20 or 25 h.p. tractor one operator will do the work of three men, and with a 40 h.p., the work of five. This is a point of great importance, considering the rapidly increasing cost of farm labor and the great difficulty of getting it at any price when it is most needed. According to the reports of the United States Department of Agriculture, the wages of farm labor in America have increased 36 per cent. in the last 12 years. In the Central States,



Courtesy A. B. Farquhar & Co.

This double cylinder road engine is for both hauling and plowing. It weighs 19,000 pounds and its road speed is 2 3/10 miles per hour. By the use of such a traction engine the cost of haulage and tillage on a farm may be much reduced with a corresponding increase in net profits

One large manufacturer, however, states that judging by a large number of reports from users of tractors, it might be figured as a general estimate that an economical tractor will use about 1 1/4 gallons of fuel per traction horsepower per day. On account of the more rapid work which the tractor can do, it is probable that it would not be used on the average as many days as would horses. It would therefore doubtless be a fair estimate to consider the average tractor as being used at least half as many days as horses, or about 50 per year, and at least 10 additional days at belt work. The present average cost of fuel in the United States is about 15 cents per gallon. Figuring on this basis the fuel cost per year for tractors of different horsepower would be as follows:

8 h.p., \$90; 12 h.p., \$135; 20 h.p., \$225; 25 h.p., \$279; 40 h.p., \$450.

The amount of lubricating oil used varies greatly with the load, but judging by reports from users it should not be more than 1-10 gallon per rated horsepower per day.

Where diversified farming is practiced and when the proper number of horses to do the work in the right way are being used, it seems fair to consider that a tractor can be used to advantage to replace about half as many horses as its rated traction horsepower. Comparing then the

where the population is relatively dense, the average cost of farm help, in addition to board and lodging, is reported as being from \$35 to \$40 a month. When, with a tractor, it is possible for one man to do the work of from two to five men, it is obvious that the tractor is a great saver of expense.

The upkeep of a tractor has been found to be less than that of animal power. The average working life of a horse and of a tractor are about the same—ten years. The tractor, however, is immune from any of the animal epidemics that sometimes sweep over a country. Further, the tractor does not wear out when idle, and there is little deterioration if it is properly housed and cared for. Like any other apparatus it requires a thorough overhauling every year.

On account of the varied nature of crops grown on different farms it is practically impossible to make any hard and fast rule as to the horsepower of the tractor that should be used on a farm of a stated size. A large manufacturer of tractors states that as fair a basis as any is to consider the yearly cost of the tractor as against the yearly cost of one-half the number of horses or mules, according to the rated horsepower of the machine. This does not mean, however, that the tractor will not do more

than that amount of work, as the best American tractors are guaranteed to deliver their full rated drawbar horsepower. On a diversified farm it is safe to estimate that a tractor will replace about half as many surplus horses as its rated drawbar horsepower, considering that the proper number of horses to do the work in the right way are being used, and in order to make the comparison fairer, the yearly cost of the tractor should be figured against the cost of one-half the number of horses rather than against the total number of horses whose work the tractor could do.

On this basis an 8 to 16 h.p. tractor costing, say, \$900, would cost \$393 a year to operate, as against \$584 for four horses. The calculation in each case includes 10 per cent. depreciation, 6 per cent. interest, and 5 per cent.



Courtesy Avery Company

A tractor will take the place of eight or ten horses. The illustration shows its use in disking land

for upkeep, taxes, shelter and insurance, these percentages being of the total investment, which in the case of the horses is \$150 each, or \$600. On a 12-25 h.p. tractor costing \$1,200 and 6 horses priced at \$900, the annual cost is \$513 for the tractor and \$951 for the horses. With a 20-35 h.p. tractor, at \$1,800, compared with 10 horses at \$150 each, the totals are respectively \$753 and \$1,535. As the horsepower of the tractor increases, its annual cost, as compared with horses, decreases. With a 40-80 h.p. tractor, for instance, it is \$1,216.50, as against \$2,920 for 20 horses.

The first three things that should be borne in mind in choosing the size of tractor that will be most profitable are: the size that will produce enough power to do the work in the best possible way; second, a machine powerful enough to do all the work at the time when it should be done; third, a tractor with enough power to do the work in the right way and at the right time with a normal load. Overloading a tractor is as unwise as overloading a horse. With an overloaded tractor the slippage increases at a rapid ratio. It is the experience of many tractor users that it is easier to err in getting too small a tractor than too large a one. The question is not so much the first cost as the profitableness of the results that may be obtained.

The right tractor in the right place is an investment that brings big returns to the farmer who owns it. It will bring better soil conditions, better stands of grain, better yields per acre and better and bigger farm profits. It will reduce production costs, which means a greater yield per acre, for it takes about as much work on land to raise 12 bushels of wheat as it does to raise 60.

The power work on a farm can be divided into three classes; belt work, hauling and field work. In each of these classes there is light work and heavy. For the latter the tractor or portable engine is by far the most economical. The light work that can be done by a belt driven machine, such as a portable or stationary gasoline,

hot air or electric engine, is such as pumping, washing, cream separating, etc. The heavy work, for which a tractor is especially adapted, is feed grinding, ensilage cutting, shelling, shredding, threshing, etc.

In light haulage, such as the carrying of people, farm produce, merchandise, etc., the automobile is rapidly displacing the horse, as the tractor is in the heavier operations of hauling grain, building materials, etc. In light field work, such as planting, cultivating, mowing, raking, etc., the horse is still supreme, but in the heavy tasks, like plowing, disking, harrowing, drilling and harvesting, the tractor is unequalled.

Agricultural scientists in Europe and America assert that deep plowing is the basis of successful farming. In Europe, where intensified cultivation of the soil has reached its highest development, deep plowing has been found absolutely necessary. Various kinds and conditions of soil require a number of different kinds of plow equipment in order to do each kind of work properly. Those interested in pursuing this subject further will do well to write to manufacturers of tractors and plows whose advertisements may be found in another section of the INTERNATIONAL REVIEW, stating as specifically as possible the soil conditions, the amount and kind of work to be done, and giving such other information as will enable the experts in the employ of these concerns to advise them accurately as to the proper apparatus to employ. Such information is furnished without charge. Much useful data can also be obtained from the unusually clear and complete catalogues issued by these manufacturers.

The same suggestion also applies to the other agricultural operations connected with preparing the soil for planting, such as disking, harrowing and drilling, in which the tractor is an important adjunct.

The farm tractor is no less efficient in many other ways besides tilling the soil. In the harvest field one tractor will pull several binders. On the highway it will haul a train of eight or ten heavily loaded wagons to market. Orchard growers not only cultivate their orchards with tractors, but use them to haul their fruit to the railroad



Courtesy Avery Company

The old, slow way, and the new, quick method of tillage. This tractor is doing five times as much as the oxen

shipping point. In lumbering, tractors are employed to haul wagons heavily loaded with logs. In road making two graders can be pulled at one time with a large size tractor, and other road making machinery can be handled in the same way. Tractors are used for pulling stumps, for moving houses, for running corn shellers, for elevating grain, for well-drilling and for pumping water. In fact the field of usefulness of the farm tractor, although a wide one, is broadening every year. Many persons have found profitable and continuous employment for their machines by doing work for others in the communities in which they live. The possibilities in this direction, especially where the average farm holdings are small, are very great.



Floor sweep



Grocer's scoop



Horse brush

"YANKEE NOTIONS" AND OTHER HARDWARE SPECIALTIES

A Big Business which has been Built up with Little Things that are Very Quick Sellers and of Interest to Every Dealer

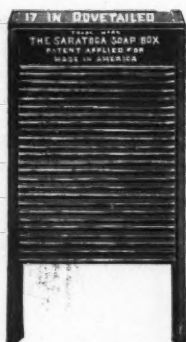
MORE than almost any other settlers in a new land, the colonists of North America were thrown on their own resources. They had an abundance of raw materials, but no foreign market for them. Export facilities such as are known to-day did not exist. Imports were confined to necessities. It took at least three months for a ship to cross the Atlantic, and from nine months to a year to order a shipment and receive the goods from the other side. Nearly everything—particularly the conveniences of everyday life—had to be created.

American inventive genius received its first great impetus from these very difficulties. It found its expression in many ways. There was much work to be done, and the hands were few. Labor-saving machinery was devised for the larger operations of turning raw substances into manufactured products to meet the growing domestic demand. Then there began to appear a multiplicity of small, inexpensive devices, principally conveniences for household use. They were the by-products of casual inventors, and the first models were pounded into shape in tinshops or smithies or whittled out at home. They were manufactured on a small scale and were first sold locally by peddlers. Later they were taken up by hardware dealers and general merchants in the towns and cities. Eventually they found their way into the markets of Europe. Because they were produced principally in the New England States, they were called "Yankee Notions," and this name, as a general designation, is still frequently applied to them.

To-day the international trade in these American specialties has assumed great proportions. They are exported to every corner of the globe. Many large factories are devoted to their production. Much inventive genius is employed in improving the staple articles which have established themselves as necessities, and in devising new contrivances to meet the requirements that arise in various markets at home and abroad.

The "Yankee notion" is simply a new and better way of doing some old familiar thing, or of filling some fresh need that bids fair to become widespread. Many of these devices are "combination tools"—a single article that can be put to diversified uses, such as a can-opener that can be employed equally well to tighten or unscrew the metal tops of glass fruit jars or to lift the tightly-fixed tops of jelly glasses. Another example of the hundreds of ingenious contrivances of this nature is a combination apple-corer, grater, potato parer and slicer—all made of one piece of tin and retailing for 10c.

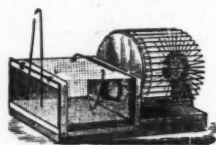
Devices that simplify and make easier the preparation of food form a large proportion of these "Yankee notions" and other specialties. Not so very many years ago the



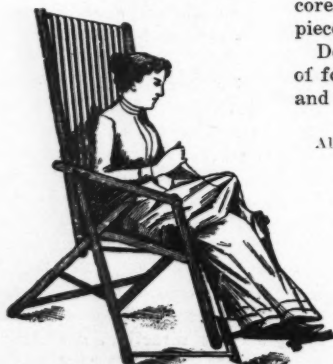
Zinc washboard



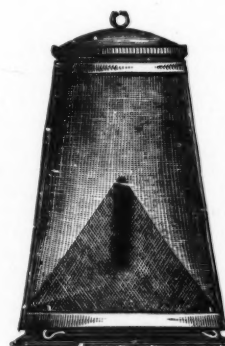
Hand coffee mill



Mouse trap



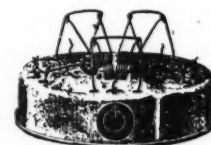
Reclining steamer or veranda chair



Wire cloth fly trap



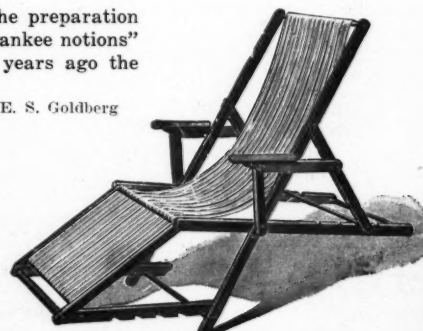
Coffee grinder



Tin choker mouse trap



Garden hose reel

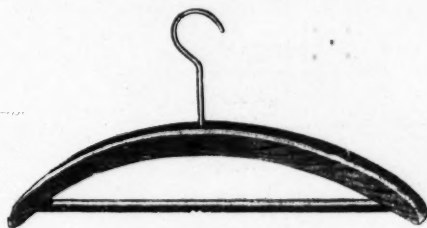


Adjustable lawn and reclining chair

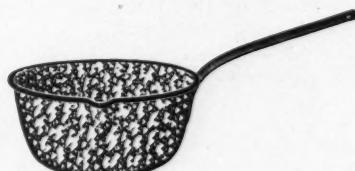
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Bamboo market basket



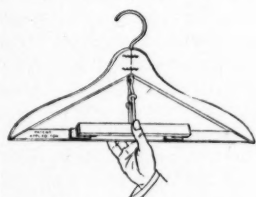
Coat and trousers hanger



Enameled ware sauce pan



Wooden spoon



Coat and skirt hanger



Towel arm



Step ladder



Whisk broom



Dust brush



Shoe blacking brush



Scrub brush

big wooden chopping bowl and the one or two-bladed chopping knife were found in every household. They were considered indispensable in the preparation of hash, mince-meat and the like. To-day, however, the inexpensive mechanical meat and food chopper, operated by hand, has taken their place. This device does the work of the chopping bowl several times faster and better. It can be adjusted instantly to grind coarse or fine, or to pulverize.

A descriptive list of the different kinds of meat and food choppers manufactured by one firm fills many pages of its book-like catalogue. It includes a great variety of such machines, from the smallest hand-power type for use in the ordinary household, up to the large, power-driven ones for hotels, restaurants and public institutions. Instead of grinding or tearing the meat, they cut it as with a pair of scissors. One firm that has specialized for years in the manufacture of these and other specialties has found literally a worldwide market for its products. They are in use even in semi-savage places in little-visited corners of the globe.

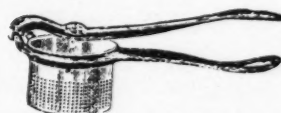
The appeal of devices of this character comes as near being universal as can be imagined. In civilized communities they are looked on primarily as labor-saving appliances, and they have expanded in size to meet the requirements of large users where economy of time is important. At the other extreme, among half barbarous peoples with whom neither time nor labor is an object, these hand choppers are sought after because they do the work so much better than it can be done by hand. Their popularity lies in their convenience—in their being even handier than the knife and block of wood that were their predecessors.

Probably no one thing has so stimulated the preserving of fruits for household use as the devices which have lessened the labor of preparing the fruits for cooking. Paring and coring apples by hand, for instance, is slow work which becomes tedious when a bushel or two must be gone over. Hand paring and coring machines, however, make this a light task. The paring is thin and even. When it is ended the apple is cored and automatically thrown off the machine. With this device a child can do as much as three adults working in the old way, and find his task a light one.

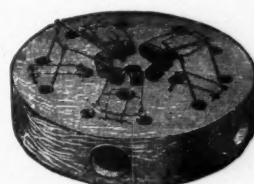
Pitting cherries and seeding grapes or raisins are things that every housewife used to dread. There are hand machines, however, that do the work so quickly and easily that it seems like play to run them. These are only a few of the hundreds of ingenious devices that have found appreciation everywhere. In almost every case the mechanical principles of the hand machines have been employed in larger apparatus, moved by steam or electricity, which have made the canning of fruits and vegetables and meats one of the greatest of American industries.

Many millions of persons drink tea or coffee—beverages now regarded as almost indispensable the world over.

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Potato press



Wood choker mouse trap



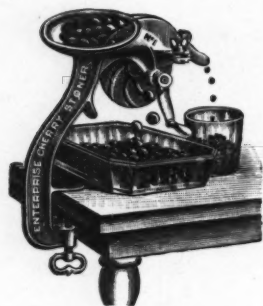
Metal saucepan



Indurated fibre pail



Dust broom



Cherry stoner



Meat and food chopper



Vegetable slicer

The primitive method of making either of them was by boiling, which had the disadvantage of leaving the leaves or grounds mixed with the liquid. The latest thing in teapots, however, is so contrived that in exactly three minutes the leaves are automatically lifted out of the boiling water in which they have been immersed. In this way the infusion is left perfectly clear and the best elements of the tea are extracted.

The coffee percolator also works automatically, but not in the same way. Boiling water is pumped up and over the coffee by the force of its own steam. The grounds are kept in one receptacle at the top of the coffeepot and need "no settling," as by the old method. At first these coffee percolators—made entirely of aluminum—were rather expensive, but lately an apparatus has been devised that will fit the ordinary coffee pot. It sells at from 25c. to 50c.

Among the aluminum novelties in the line of household utensils is a steam cooking kettle which operates on much the same principle as the coffee percolator; a combination roaster, steam cooker, egg poacher, etc.; collapsible cups and mugs, and a wide variety of small things, such as shakers, strainers, etc.

The decreased cost and increased output of aluminum—which is a comparatively new metal—have greatly enlarged the scope of its use and the diversity of the small-priced articles manufactured from it. According to the Roman historian, Pliny, aluminum was discovered long ago; then the secret was lost. Its rediscovery in the present generation has added much to the conveniences of modern life.

The story goes that, in the reign of the Emperor Tiberius, a metal worker brought to the palace a magnificent cup of a brilliant white metal that shone like silver, but was more durable and much lighter. The Emperor asked the metal worker whether anyone but him knew the process of manufacture and received the reply that the secret was known only to the artisan. The Emperor fearing that the value of gold and silver would be reduced by the new metal that was derived from common clay, and being determined to avert such a catastrophe, commanded that the discoverer and all his apparatus be destroyed so that the secret might be lost. In this way the world was for centuries deprived of the use of aluminum.

In woodenware there are as many or more specialties than in metal. The common washboard is manufactured in a score or more different patterns. The corrugated por-

tion is made of zinc, of coated steel and of glass, and in a diversity of patterns. Then there are wooden dish-drainers, boards for meats and pastry and for ironing clothes. Even such a seemingly simple thing as a wooden hanger for coats or suits has been the subject of long and serious study in order to arrive at a design that will hold the clothes compactly, yet without stretching or slipping. Folding tables, chairs, stepladders and other things that can be made more compact in this way come in an extraordinary variety of designs and sizes. Pails and pans made of indurated fibre are displacing wood and tin to a certain extent, owing to their superior lightness. Satchels are made of fine strips or splints of spruce, like baskets.

Traps for catching such pests as rats and mice or flies have been devised in such a multiplicity of forms, that no one ever has attempted to enumerate and classify all of them. There are some rat and mouse traps that are easy to get into, but impossible to escape from; others kill the rodents instantly in a variety of clever ways. Many ingenious ways of catching and killing flies and other insects have been invented. Some fly traps are cages of fine wire netting; others are sheets of paper covered on one side with some sticky substance; still others are flat wire contrivances with which flies or mosquitoes may be killed by a blow without defacing the walls or furniture.

For sprinkling lawns automatically there are scores of attachments. Some of them scatter the water about in a number of tiny jets; others toss it to and fro, first in one direction and then in another; still others are like fountains.

It would be difficult to find any common form of housework that a "Yankee notion," or some specialty appliance, has not improved and made easier. There are flagholders, ice-shredders, bung-starters, cobblers' kits, ash sifters, egg beaters, bread slicers, brushes for every purpose, clothespins, mops, potato mashers, rolling pins, spice cabinets, soap shakers—the list is endless. And as fast as a new want appears a new device to fill it is supplied. It is a big business that has been built up in little things that the modern world could hardly do without.

There are many ways in which the retailer can increase his sales of kitchen and labor saving utensils that come under the broad characterization of "Yankee notions." First in importance come the show windows. Too many show windows are silent. They can be made to talk—to reflect the personality of the establishment.

Rapid grinding mill and pulverizer



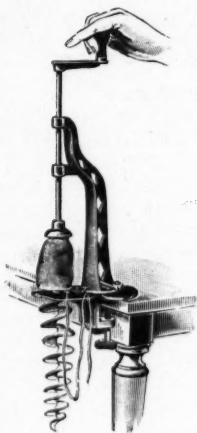
Lawn sprinkler



Cobbler's foot standard



All illustrations on this page loaned by the Enterprise Mfg. Co. of Pa.



Courtesy Kenton Hardware Co.



At left, a Saratoga potato chipper; in center, a convenient household or grocer's scale; at right, a turntable apple parer

A few of the elements that have been found particularly effective in window trimming are: attractively lettered cards; a mechanical display or a window demonstration two or three times a month, and enough articles in the windows to insure a strong general appeal. It seldom pays to feature one article, no matter how important it may be. Descriptive cards may be shown with each article, and there may be one large card that will be a sort of bulletin of additional information.

One striking method of demonstrating aluminum ware for example, is the "acid test." Coins of copper, nickel and silver and a piece of aluminum, after having been dipped for some time in a 60 per cent. solution of nitric acid, are suspended on a wire with small show cards that call attention to the action of the acid on all the metals except aluminum, and show the superior qualities of the latter.

Enamelware is more widely used by housewives for cooking purposes than almost any other material. Dealers have found it profitable to explain to their customers the difference between the various grades. Enamelware is glass fused on a metal shell, and is the most sanitary surface imaginable for cooking purposes. Owing, however, to the vitreous surface, the dealer might explain, enamelware should not be roughly handled, nor should it be exposed to sudden heat and cold. The fact that vegetable acids have no effect upon an enamel surface, giving it a decided advantage over most other materials, might also be pointed out.

The dealer who carries a comprehensive line of the modern labor-saving devices for the home will often find it to his advantage to, now and then, devote a special section of his store to a display and demonstration of these household specialties. A demonstration booth may be constructed in the form of two wooden frames about 6 feet high and as wide as the space will allow. These may be covered with green burlap or some similar material, placed a convenient distance apart; and the space between

backed with the burlap, thus forming a cheap but effective demonstration booth.

In such a space a complete assortment of household specialties can be arranged, displayed and demonstrated. Hot coffee may be made in percolators, hot toast on the electric toaster, and so on. If the salespersons note down the name of every woman who comes to this exhibition, it will subsequently facilitate keeping them interested and in offering to send them certain specialties for trial, if this is practicable under local conditions.

To sell household specialties, it is first of all necessary really to understand what each specialty will do, so that

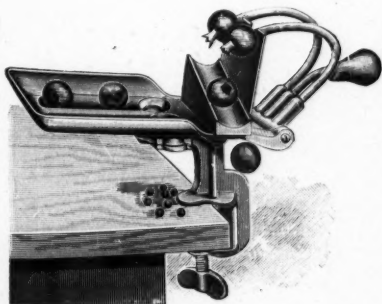


Courtesy Robbins & Myers Co.

Many manufacturers supply cards that help the dealer to sell their line

a clear description and demonstration may be given to the customer. An American merchant who has two large retail establishments devoted exclusively to household specialties once said that, on analyzing his sales, he had found that not more than 25 per cent. of them were made behind the counter, while the remaining 75 per cent. were made in front. The reason for this is that if a household specialty is passed over the counter, the customer may or may not handle it correctly. On the other hand, if the salesperson is at the front of the counter with the customer, exactly how the article should be used can be explained more readily and clearly.

A family cherry stoner

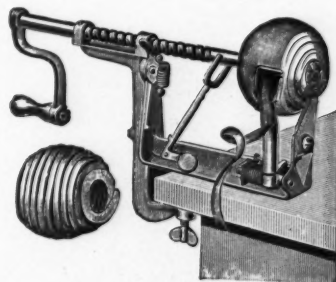


Self-wringing mop



Courtesy Hilker Mop Co.

"White Mountain" parer, corer and slicer



Four corner illustrations on this page loaned by Goodell Co.

THE AMERICAN "JITNEY BUS"

A New Idea in Transportation that Offers Many Attractions to the Small Capitalist or the Man who is Looking for a Remunerative and Healthful Occupation

THE recent advent and tremendous expansion of the "jitney bus," in more than two score large cities in the United States, is an event for which no comparison can be found in the history of transportation. To makers of automobiles, to agents, distributors and users, not only in America, but throughout the world, it offers possibilities so great that their limits are not yet clearly defined.

A "jitney bus" is a motor vehicle of almost any size or kind that carries passengers for a 5-cent fare upon any temporary route that seems likely to produce a profit. The types of vehicles covered by this term range in size from the large double-deck omnibus down to the ordinary two-seated touring car familiar to everyone. The "jitney bus" is distinctive, however, in that it is usually driven by its owner who picks up fares wherever they may be had.

The phrase "jitney bus," which was coined offhand less than six months ago, is now commonly used all over North America. The expression "jitney" is said to be side show barker's slang for a 5-cent piece. Its popularity probably springs from its terse way of defining the rate of fare and the nature of the common carrier.

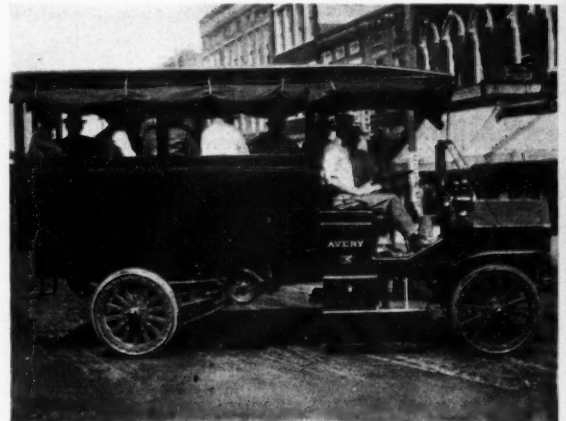
This form of cheap transportation had its origin in Los Angeles, California, a city of 550,000 population. A motor coach company was organized there in April, 1914, and three months later commenced operating more than 30 double-deck buses between the city and nearby points, in direct competition with the electric railways. The bus line carried passengers about 20 miles for 25 cents, and speedily had more patrons than it was able to accommodate.

During November, 1914, many owners of small cars, attracted by the business being done by these buses, began taking passengers at a 5-cent fare in certain districts in Los Angeles. These conveyances were so well patronized that their average earnings were reported to be as much as \$10 or \$12 a day.

In a very little while similar transportation enterprises, mostly individual, but often in the hands of large companies operating buses of considerable capacity, were

started in the principal cities in the Pacific Coast States. Almost simultaneously the "jitney bus" idea spread eastward until it overran nearly all of the United States, and gained popularity in some of the cities of Canada.

Among the cities in which these 5-cent buses have been installed and are being operated extensively are Los Angeles, Oakland, Pasadena, Fresno, San Diego, San



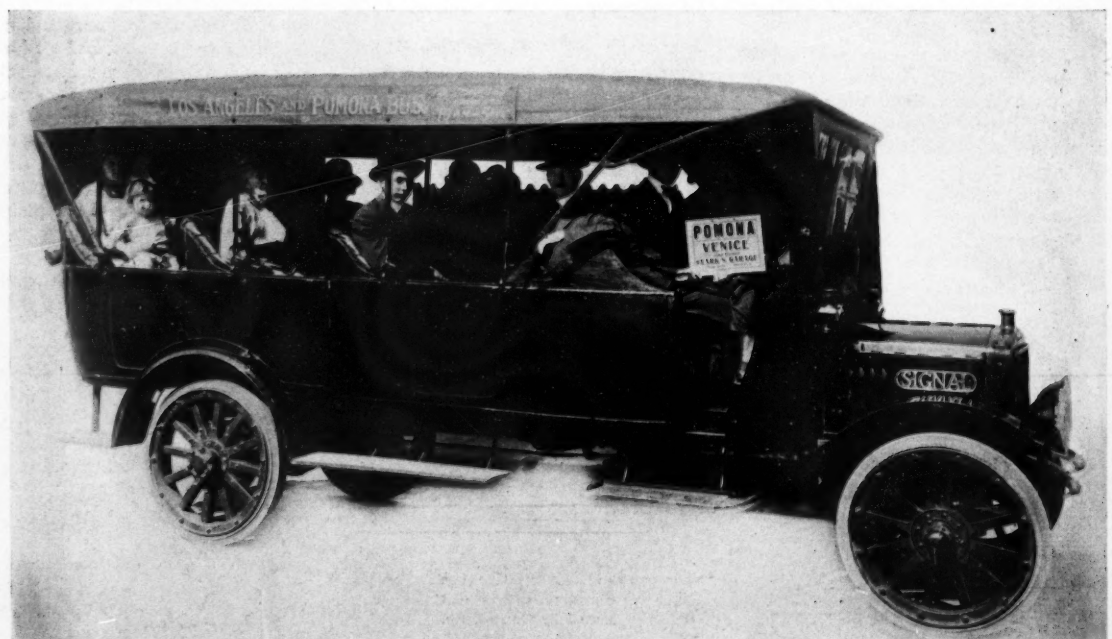
Courtesy Avery Company, Peoria, Ill.

This one-ton truck is used as a "jitney bus" in Canton, Illinois, and is proving very satisfactory to its owner

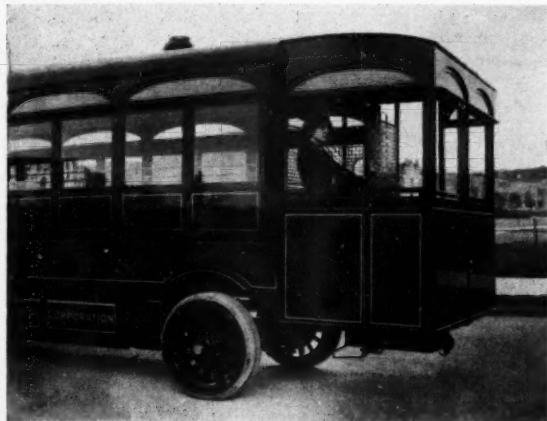
Francisco, Portland, Seattle, Tacoma and Vancouver, all on the western side of North America. Inland there are such cities as El Paso, Houston, Galveston, Fort Worth, Dallas, Austin, San Antonio and Beaumont. These are all in the State of Texas, in the southwestern part of the United States. In the Kansas cities of Wichita, Lawrence, Topeka and Emporia, the 5-cent fare bus is as much in

One of three "jitney buses" operated by the same owner between Pomona and Los Angeles, California. This car has covered 23,000 miles with only minor motor repairs. The front tires are still in use, and the rear tires gave 14,000 miles of service

Courtesy Signal Motor Truck Co., Detroit



demand as in Texas or California. The same is also the case in large cities farther East, such as St. Louis, Missouri; Denver, Colorado; Baltimore, Maryland; Omaha, Nebraska; New Orleans, Louisiana, and Detroit, Michigan. The "jitney bus" has not yet secured a strong foothold either in New York City or Chicago, owing to the local transportation problems in those great centers being more difficult of solution than in smaller places. The principal opponents of these 5-cent fare buses in every city are the electric railway lines, with which they directly compete.



Courtesy People's Five-Cent Bus Corporation, New York
Women conductor-cashiers are to be employed on these New York 5-cent fare prepayment electric buses

The aspect of this new phase of motor transportation that is particularly interesting to the automobile dealer, agent or distributor is, however, the possibilities it offers for a wide and quick expansion of the use of motor vehicles as common carriers.

"This new and popular means of transportation never will be suppressed" recently declared John N. Willys, president of the Willys-Overland Company, who has been making a personal study of the "jitney bus," particularly in the California cities where its remarkable rise to popularity started. Continuing, he pointed out that the Ameri-

can public was just awakening to the possibilities and advantages of motor transportation, and alluded to its great development abroad.

"In England," he said, "the motor bus transportation of passengers at low rates of fare is no longer confined to the cities. There have been dozens of bus services established between smaller towns. Out of London lines run in all directions carrying thousands of persons into the country to points which have never before been available to the rank and file.

"At the beginning of the war a tremendous movement was on foot to nationalize motor bus transportation and compete more and more with steam railways, which in their suburban passenger traffic already are being hit by bus competition. In historic old Oxford the trams have entirely disappeared from the streets."

Here Mr. Willys discussed the conditions which he believes are bound to bring about a complete revolution in traffic not only in American cities, but in those of other countries.

"In London," he said, "it has been demonstrated that the motor bus, without attaining dangerous speeds, can so completely outstrip the electric street car in the transportation of passengers as to make the latter unattractive to the public. The street car gets tied up every time a driver of any other sort of a vehicle gets on the track. These delays make car schedules extremely slow and uncertain.

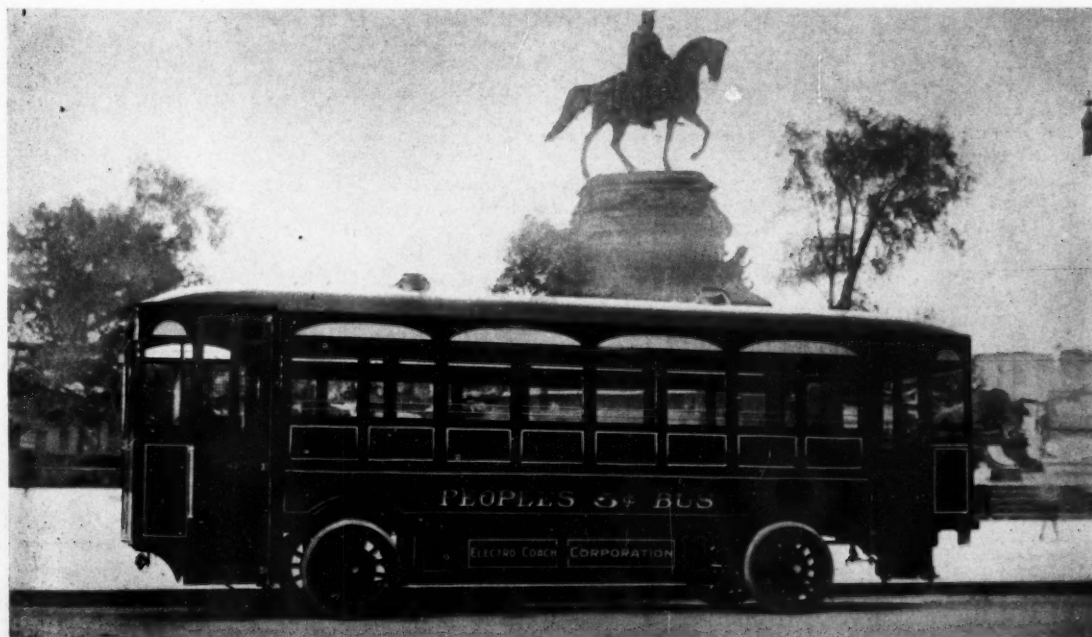
"On the other hand, despite the fact that the bus itself weighs from 7,000 to 8,000 pounds it accelerates quickly, runs around obstacles and delivers and picks up its passengers next to the curb."

"Jitney buses" made their appearance in Vancouver about January 1, 1915," reports the U. S. Consul-General at that city. "At first a few taxicab drivers and owners of automobiles appeared on the streets with placards on their cars announcing 5-cent fares to various parts of the city along the routes traversed by the electric tram lines. The success attained by the pioneers in the project and the popularity of the 'jitney' in competition with the street cars encouraged others to engage in the business, and at the end of the first two months there were about 350 buses operating on city and suburban lines.

"The average daily earnings are reported to be \$8 for each car, an aggregate of over \$80,000 a month. This competition has reduced the earnings of the electric rail-

Type of electric bus which it is proposed to operate in New York City at a five-cent fare. It is a four-motor, four-wheel drive. In case of accident one or two motors can be disconnected and the vehicle operated with the remaining motors

Courtesy People's Five-Cent Bus Corporation, New York



way and has also affected the city revenues, as the municipality receives a percentage of the earnings of the tramway company. In January there was a decrease of 1,138,333 in the number of passengers carried by the electric railway company, as compared with the same period last year, when 3,364,062 passengers were carried."

The manner in which this 5-cent bus business has been put upon an organized basis in Vancouver is generally similar to the methods followed in American cities in order to overcome the objections that have been raised to that



Courtesy Dart Motor Truck Co., Waterloo, Iowa

A "Model C" jitney bus that is popular in many parts of America owing to its low initial cost and economy of operation

form of transportation. In Vancouver the control of the new industry is in the hands of the Auto Public Service Association, which regulates routes and rates, and has experienced traffic managers to supervise the auto-bus men. The object is to secure and retain favorable public opinion by rendering safe and efficient service.

Mutual protection among the vehicle owners, and the protection of the public using the 5-cent automobiles, are secured by insurance to the extent of \$1,500 per passenger and \$5,000 per car. No driver is personally covered where the accident is caused by his own neglect, but all passengers and even pedestrians are protected.

Further regulation and control of the business are questions that are being taken up by the municipal council. The innovation is said to be meeting with strong opposition from the local tramway company, but the sympathy and popular support of the majority of people who depend upon public service for transportation are reported to be with the motor buses.

As in other cities where this new form of public transportation is in use, the establishment of an auto-bus system in Vancouver has provided employment for a large

number of men, and brought into use automobiles owned by persons who were unable to maintain touring cars for pleasure. The United States Consul-General says that the rapid increase in the number of these 5-cent fare buses, since they first made their appearance in Vancouver, and the increasing popularity of motor cars as a means of cheap transportation will soon give them a monopoly in passenger traffic on the streets of the city.

The cost of operating these buses depends, of course, in every instance, on local conditions, such as the initial cost of the vehicle and the expense of operation and maintenance. The profits depend, naturally, on the number of passengers and the average distance they are carried for 5 cents.

In December, 1914, a representative paper in the American motor truck industry published a list of 19 companies using auto trucks in passenger service, of which 7 operated in cities, 6 on suburban runs, and 6 in interurban service. The average bus capacity was 20 passengers, and the average daily mileage 91, or 33,200 miles per year. The total average cost of operation was ascertained to be 16.66 cents per bus mile. This included tires, gasoline at 18 cents a gallon, oil and grease, repairs and wages of the chauffeur. Including interest, housing, insurance, taxes and general expense, the total was increased to 24.82 cents per bus mile.

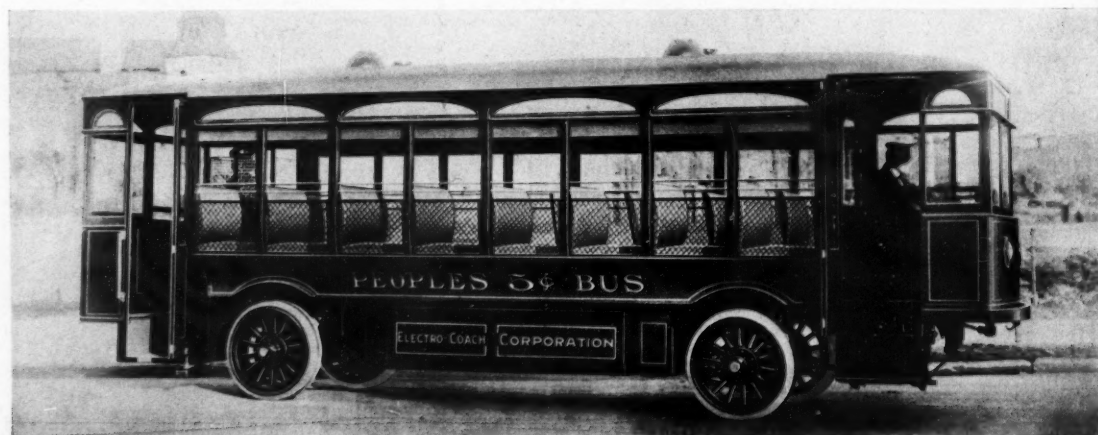
The average cost of operating a "jitney" service in a moderate-priced car, capable of seating five passengers, is stated by a large distributor in the United States to be 3.4 cents per mile, but local conditions may lower or increase this figure.

The uses of the "jitney bus" in the cities in which it now is are almost as various as the cities. Only a few of them are mentioned here. Others will suggest themselves to persons in various parts of the world who may be interested in looking into this business, which offers inducements for the employment of a very small amount of capital or of a very great deal, according to the number and size of the vehicles purchased. The 5-cent bus carries the business man to and from his work; it takes the children to school; it serves the purposes of the woman who does her daily marketing, and later an afternoon's shopping; it enables workers to get home for luncheon. In fact, it seems to offer transportation facilities of an extraordinarily varied nature.

A typical instance of one man's experience in operating one of these 5-cent fare vehicles will suffice. He lived in a large American city and recently purchased a new car for a little more than \$1,000. He has been running this car in all kinds of weather for several weeks, averaging about 125 miles a day. His average gross daily receipts have been a little less than \$10. On some days he has received as much as \$12.50. His net profits, of course, were enhanced because he drove himself and made his own repairs.

This illustration shows the semi-convertible feature of the electric buses that it is proposed to operate in New York City. Panels and glass are removed and screens substituted for summer service, thus providing greater comfort

Courtesy People's Five-Cent Bus Corporation, New York



GALVESTON—ONE OF THE WORLD'S BUSIEST PORTS IN 1915

Long the Greatest Cotton Port in the World, the City on the Gulf is Now a Leading Shipper of Wheat and has a Fast Growing Outbound and Import Trade with Latin America

Illustrated by Photos Loaned by the Galveston Commercial Association

THE aggressive and enterprising citizens of Galveston are confident that the completion of the Panama Canal will bring a tremendous increase to that port's activities and international importance. There are several excellent grounds for this belief. From Denver the distance to the Panama Canal via New York is 3,928 miles, via San Francisco it is 4,731 miles, while by way of Galveston it is only 2,631—the land and sea portions of the route forming almost a straight line. From Kansas City to the Panama Canal the distance via New York is 3,333 miles, via San Francisco 5,341 and via Galveston 2,320. From Chicago, the greatest railroad center in the United States, the distance to the Canal via New York is 2,811, via San Francisco 5,631, and via Galveston, 2,632 miles. The people of Galveston further point to the fact that theirs is the nearest large port to the geographical center of the United States, and that the greatest development in this country at the present time is being made in the territory tributary to Galveston. While the great war has retarded the expansion of trade over the Panama routes it has, on the other hand, stimulated to a remarkable degree the activity of the port as a wheat shipping

houses now aggregates over 1,000,000 bales, while the handling equipment is capable of taking care of more than 5,000,000 bales. The city has the largest cotton seed grinding plant and cotton concentrating plants in existence. The following table from the Department of Commerce shows the exports of cotton from Galveston for the last 20 fiscal years:

Fiscal Year—	Bales.	Value
1895.....	1,349,059	\$38,949,296
1896.....	746,952	31,739,423
1897.....	1,233,052	47,486,467
1898.....	1,513,815	46,714,156
1899.....	2,030,233	57,670,423
1900.....	1,568,694	63,271,186
1901.....	1,699,227	82,093,882
1902.....	1,901,460	81,303,379
1903.....	1,746,269	80,005,500
1904.....	1,883,093	116,725,342
1905.....	2,269,741	106,218,935
1906.....	2,342,003	136,684,314
1907.....	3,500,670	199,076,379
1908.....	2,201,236	133,900,267
1909.....	3,255,825	160,508,819
1910.....	2,114,158	155,920,852
1911.....	2,689,981	207,018,189
1912.....	3,673,394	200,862,292
1913.....	3,867,936	251,613,273
1914.....	3,347,675	234,249,290

There was a slight falling off in both quantity and value for the fiscal year 1914 owing to the short crop, the

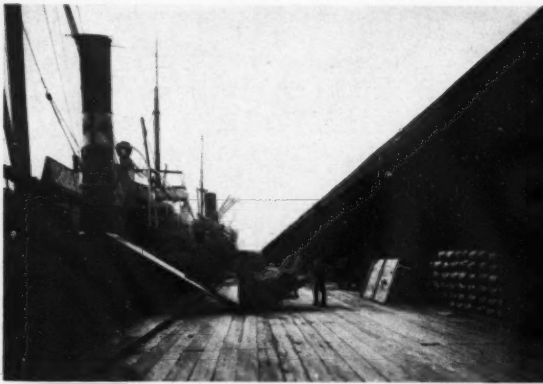


Bird's-eye view of Galveston Harbor, looking west from Pier 19. Galveston has what is known as the slip system of piers, which permits of loading 100 ocean-going vessels at one time

center, with the result that at the present time its wharves are busier than ever before in the city's history.

Galveston is the greatest cotton shipping port in the world, and has recently enlarged and improved its facilities for handling this important staple. The storage capacity of the cotton concentrating sheds and ware-

decrease as compared with 1913 amounting to 520,261 bales and \$17,363,983. With the exception of that year, however, exports of this staple were the largest in the history of the port in point of value, although not in quantity. For the current fiscal year ending June 30, 1915, the expectations were that the trade of the port



A ship at Galveston can take on its entire cargo at one berth, and does not have to transfer from one pier to another for different commodities. At left, ship loading cottonseed meal; at right, a United States army transport

would be very heavy, but the outbreak of the war caused a temporary suspension of shipments. This was followed by a gradual resumption and on the reopening of the exchanges the outward movement began to break all records. In the month of February alone no less than 62 steamers loaded with cotton at Galveston and Texas City, including two for Japanese and Russian ports via the Panama Canal. The following table shows the exports for the current fiscal year to the end of March:

STATISTICS OF COTTON EXPORTED THROUGH PORT OF GALVESTON FROM JULY 1, 1914, TO MARCH 31, 1915.

Months—	Bales.	Pounds.	Value.
July	53,470	27,530,513	\$3,683,225
August	7,991	4,232,622	5,344,490
September	65,970	353,192,279	3,045,373
October	305,443	162,772,137	11,829,688
November	349,920	205,592,759	15,932,009
December	557,967	297,308,040	22,793,054
1915—			
January	584,011	313,747,262	25,780,856
February	535,811	287,421,857	24,410,682
March	435,260	232,004,883	19,699,626
Totals	2,895,843	1,983,802,352	\$132,519,003

Down to the end of March the exports of cotton from Galveston for the current fiscal year amounted to 2,895,843 bales, or 451,832 less for eight months than for the entire year 1914—a remarkable record in view of the fact that there was little or no cotton shipped during two months that under ordinary circumstances would have been the heaviest of the year. Exports to the end of February included 894,919 bales to Great Britain, 206,472 bales to France, 854,601 bales to other continental countries in Europe and 119,874 bales to Japan and Mexico. In addition to 21 cargoes for Liverpool in February there were 3 each for Hamburg and Rotterdam, 8 for Genoa, 10 for Gothenburg, 5 for Havre, 4 for Manchester, and others for Christiania, Copenhagen, Barcelona and Vera Cruz. The largest cargo shipped during the month was that of the *Civilian* for Liverpool with 20,560 bales, while 37 steamers carried more than 10,000 bales each.

The war has also brought to Galveston a remarkable increase in the export movement of wheat, the total ship-

ments since September 1, 1914, not only far surpassing those for the corresponding period of the previous fiscal year, but exceeding the total for any entire year in the history of the port. The following table, from the *Galveston Daily News*, shows total exports in quantities and values for the 13 fiscal years ending June 30, 1914:

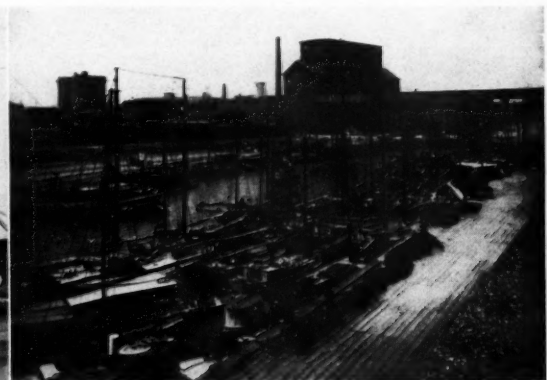
Year—	Bushels	Value
1913-14	12,459,849	\$9,419,228
1912-13	13,213,697	12,624,640
1911-12	221,856	238,267
1910-11	52,638	50,418
1909-10	2,375,984	2,551,111
1908-09	6,990,190	7,034,729
1907-08	8,130,928	8,355,815
1906-07	14,204,631	10,804,396
1905-06	3,759,110	3,161,380
1904-05	56,000	55,526
1903-04	17,135,435	13,549,820
1902-03	16,308,842	12,089,108
1901-02	9,946,912	6,890,575

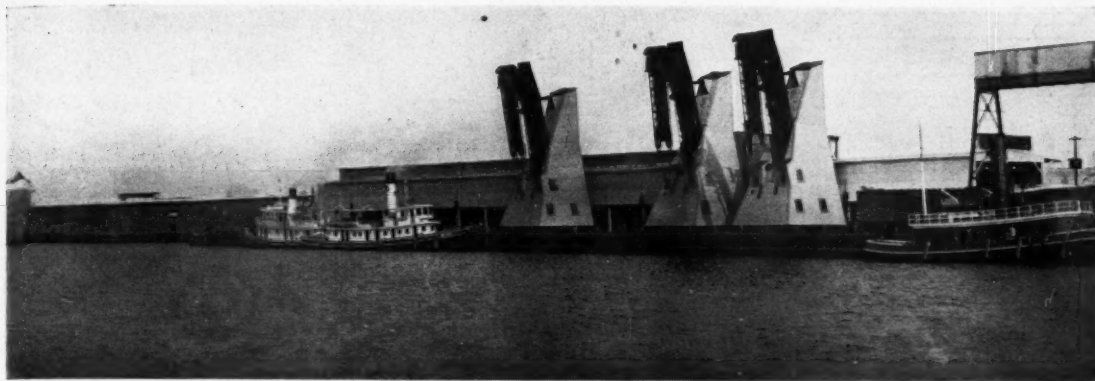
As these figures show, the largest season's record for wheat exports prior to 1914 was that of 1903, when 17,135,435 bushels, valued at \$12,624,640, were shipped to foreign countries. During the last six months of the calendar year 1914 (which would be the first six months of the fiscal year 1914-1915), wheat exportations at Galveston attained a volume without precedent in the history of the port. During the single month of July, 5,076,894 bushels of wheat were shipped from Galveston to foreign ports; in August, 5,313,435; in September, 6,708,955 bushels. In October and November the exports amounted to 4,853,330 and 5,415,573 bushels respectively, and in December a new high record for a single month was made, with shipments aggregating 6,998,388 bushels. In January the exports fell off considerably, amounting to 3,039,248 bushels, while shipments in February aggregated 3,555,306 bushels, according to the Grain Inspection Department of the Galveston Cotton Exchange and Board of Trade. According to this authority the total for the corresponding month in 1914 was only 296,000 bushels, making an increase for February of this year over last of 3,259,306 bushels. The total since September 1, 1914,

Loading Texas wool. Vast quantities of wool from Texas, Arizona and New Mexico are exported via Galveston



"Mosquito Fleet" in slip at Galveston. These boats ply along the coast transporting vegetables, oysters and fruit





Modern banana conveyors for transferring bananas direct from ship to cars. Galveston is rapidly becoming an important port of entry for fruit and other Central and South American products

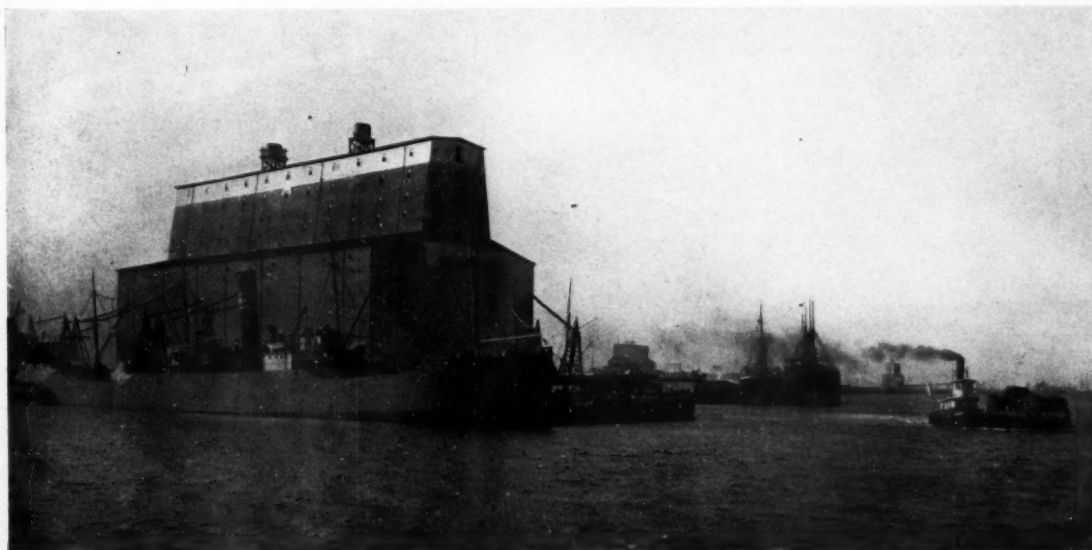
was 33,977,200 bushels, as compared with 1,895,097 for the same period in the previous season, an increase of 32,082,103 bushels. The February shipments were principally to southern Europe, comprising two sailings to Liverpool, three to Manchester, one to Havre, two to Barcelona, one to Chalkis, two to Bordeaux, six to Marseilles, one to Patras, two to Piraeus, one to Salonica, one to Swansea and one to St. Louis de Rhone. In March the exports of wheat aggregated 3,406,400 bushels, making the total for the fiscal year thus far (Since July 1), 44,367,529 bushels, valued at \$53,601,722.

This heavy wheat movement entailed many difficulties for the mercantile and shipping community of Galveston, but these were surmounted successfully, with the result that the port now has connections established with many ports to which previously Galveston sailings had been unheard of. Not only were immense shipments made to Greece and other parts of southern Europe, but there were also heavy exports to South America, owing to the failure of crops in some South American countries. On November 17, the large Southern Pacific Elevator at Pier 41 was burned, leaving 900,000 bushels of wheat a smoldering mass. Despite this serious loss to the shipping facilities of the port the other four grain elevators were able to take care of the phenomenally heavy movement of December without any serious difficulty or delay. The Southern Pacific is now constructing a new and better elevator near the site of the burned structure, with the result that when the new crop movement begins the port will be in better shape than ever before to handle this important staple.

Among the other commodities that swell the total of Galveston's exports may be mentioned cotton seed meal and cake and cottonseed oil, various provisions and packing house products, lumber, staves and shooks, live stock, broom corn, iron and steel scrap, feathers and linseed cake. The port is also well situated to handle exports of manufactured products coming from the factories of the interior States, and particularly those destined for Latin-American markets and for points best reached via the Panama Canal.

The import trade of Galveston has been increasing very rapidly in recent years, amounting to \$12,245,064 for the fiscal year ending June 30, 1914, or an average of over a million a month. The largest contributor to this total is Mexico, imports from that country amounting last year to \$4,023,397 and consisting chiefly of crude oil, cattle, sisal hemp, bananas and various tropical products. Imports from Cuba amounted to \$1,545,035, the principal commodity being raw sugar. In 1912 a new import movement for Galveston began in receipts of corn from the Argentine Republic to the amount of about a million bushels. Last year 3,235,493 bushels were imported from that country, valued at \$2,082,645. From Mexico and Central America a total of 1,591,855 bunches of bananas were imported last year, valued at \$711,081. For handling this product three electric conveyors have been erected at Pier 19 so as to bring the fruit ashore in the most scientific manner and without bruising or damaging it in any way. A checking system on the wharf separates broken bunches from the good ones and the ripe ones from those that are

Elevator "A," capacity over 1,000,000 bushels of wheat, which can be loaded direct from elevator into hold of ship. This elevator has loaded 201,000 bushels of wheat in seven hours and five minutes





Galveston's seawall and beach, with the new \$1,000,000 Hotel Galvez. The city has a wide, smooth beach 30 miles long, with fine surf bathing

still green. Coffee, rubber, ixtle, and many other tropical and semi-tropical products are also brought to Galveston in considerable quantities from South and Central American countries and the West Indies. Altogether 34 foreign countries contributed to the import movement of the port last year.

The most interesting and promising portion of Galveston's import trade is that with Latin America, and the fact that steamship lines are now plying between this port and more than a score of Latin-American and Caribbean ports is tending to stimulate export trade over these routes as well. The rapidity with which this trade is increasing is shown by the fact that Latin-American exports and imports of Galveston combined amounted to \$15,928,318 in 1913-14, as compared with \$9,385,091 in the year 1912-13, a gain of \$6,543,227 in a single year. This increase was all the more remarkable in view of the disturbed conditions in Mexico, and was due to a united effort on the part of Galveston and southern shippers to get into direct personal touch with the principal buyers.

All told, the total exports through the port of Galveston for the fiscal year 1913-14 aggregated \$255,758,265 in value, while imports amounted to \$12,245,064. From present indications these records will both be surpassed during the current year. In exports the port ranks second among American cities, being surpassed only by New York—a noteworthy achievement for a city of about 50,000 inhabitants. In 1912 and again in 1913 Galveston ranked second in exports and imports combined.

The number of ships entered and cleared at the port during the year 1913-14 was as follows: Entered, foreign, 587 of 1,381,583 tons; coastwise, 506 of 1,509,034 tons; cleared, foreign, 789 of 1,975,790 tons; coastwise, 339 of 927,178 tons. The apparent discrepancy between the number of vessels entered and cleared by classifications is explained by the fact that Government lists all vessels that come from another American

port as coastwise, whether of foreign register or hailing originally from a foreign port or not. Thus many vessels call at other American ports en route to Galveston and are listed as having entered "coastwise" which sail direct for a foreign port and are then listed as having cleared "foreign."

One of the reasons why the port is able to handle such a heavy export traffic is the excellent system of railroad yards and tracks running direct to the various wharves. Altogether there are over 190 miles of track in the Galveston yards, and in the year ending June 30, 1914, the Galveston Wharf Company and the Southern Pacific Terminal Company together handled 184,737 cars. In that year the months of heaviest movement were September to December, 1913, the total for October alone being

23,584 cars. This year the heaviest movement has been somewhat later owing to the partial suspension of cotton shipments during the first months of the war.

A development of the utmost interest and importance in connection with the export movement of cotton at this port is the recent purchase by the Southern Products Company, the Texas branch of the great Japanese house of Mitsui & Co., of ground for a cotton press at Galveston. The plant will cover two entire city blocks. This house has heretofore imported its American cotton via San Francisco, but the opening of the Panama Canal has made a direct route to some Gulf port more economical and Galveston has been selected as the port of shipment. In the case of a recent shipment from Galveston to Yokohama—the *Penrith Castle*, which carried a cargo of 3,270 tons, or 12,200 bales of cotton—it was estimated that the saving effected by using the Canal as compared with the route via the Straits of Magellan amounted to \$5,000. This vessel went through the Canal, October 23. Several shipments of cotton have been made from Galveston to Russia via the Canal and Vladivostok, and thence overland across the Siberian Railway—Atlantic routes being

Galveston's famous boulevard driveaway and bath houses. Its various waterfront attractions and pleasant climate bring the city over 1,000,000 visitors annually



impossible owing to the war.

The *Penrith Castle*, whose voyage has just been mentioned, loaded at Galveston and sailed August 15, the very day the Canal was opened for traffic. She was the first steamer from Galveston to pass through the Canal and the first steamer to carry cotton through. She blazed a new trail in world commerce, established a new route between ports that had never before been directly connected—carrying straight from Galveston to Yokohama and Kobe a consignment of cotton that would otherwise have gone overland to San Francisco and thence across the Pacific, or that might have gone via Suez or the Straits of Magellan. Before the end of the year nine other vessels followed the same route, carrying cotton cargoes valued at more than \$5,000,000 and up to the present time the number of sailings from Galveston direct to the Far East via Panama is not less than a score.

Vast sums have been spent by the Federal Government and port authorities for channel and other improvements and a minimum depth of 30 feet is now obtainable over the bar and all the way up to the city's docks. Some 56 lines of steamers regularly ply between Galveston and all parts of the world—a total likely to be much increased after the war. The docks at present have a total of 2,485,964 square feet of covered space, while the ships can receive their entire cargo without change of berth owing to the admirable system of switching facilities and train shifting room behind the various piers.

Although located further south than any other American city of its size, the average maximum temperature for July and August during the last ten years has been only 88 degrees, Fahrenheit, and there is no record of the temperature ever reaching 100 degrees. The winter temperature is moderate, 75 and 80 degrees being common and frost a rarity. In its vegetation the city is semi-tropical, palms, oleanders, oranges, figs and similar trees predominating. The proximity of the Gulf removes all malarial influences and the city has become a very popular winter



A view of one of Galveston's residential streets, showing broad sidewalks, charming private grounds and semi-tropical vegetation

and bathing resort, the number of visitors being estimated at more than 1,000,000 annually. It has excellent hotel facilities, including the million dollar Hotel Galvez, fine surf bathing, and a 30-mile beach course for automobile racing. The famous sea wall, built to hold back the waters of the Gulf, with its Seawall Boulevard stretching for five miles along the beach, are also attractions. Equally interesting is the concrete causeway $2\frac{1}{4}$ miles long that connects Galveston Island with the mainland. This structure, which is reinforced with steel, carries two tracks for steam railroad trains, one track for an inter-urban electric line, a roadway for vehicles and a promenade for pedestrians. It was built by the county, in connection with the railroads entering the city, at a cost of \$1,600,000.

Galveston is an interesting example of the commission form of government, having been governed by a commission of four members and a mayor-president for the last 15 years. The system appears to have worked very well and the financial position of the city has been greatly improved as compared with what it was previously.

The shifting of world trade routes as a result of the war has been retarded by the great war, but already Galveston is feeling the stimulus of new traffic channels. Several

steamers have arrived at the port bringing large cargoes of California products from San Francisco via the Canal. This trade is only in its infancy and time will be required to establish the necessary distribution routes and facilities in the interior. When these are ready and are working smoothly it is likely that a trade with the entire Pacific Coast will develop that will compare favorably with that now carried on by sea between Galveston and other American ports on the Gulf and along the Atlantic seaboard. At present an average of more than one American steamer for every day in the year arrives at Galveston from the Atlantic ports.

There are altogether more than ten miles of improved wharf frontage at Galveston, with terminal facilities exceeding \$20,000,000 in value.

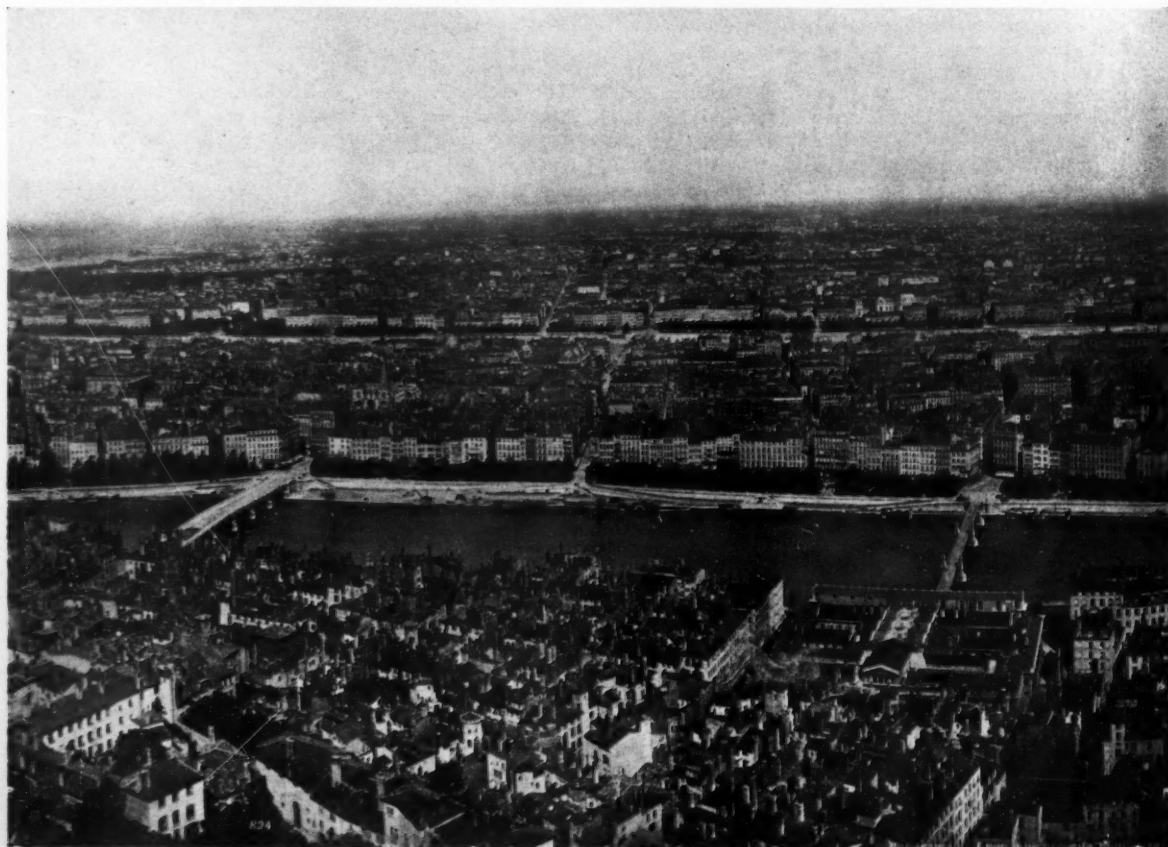
A bird's-eye view of Galveston, looking toward the Gulf of Mexico. The city is laid out in exact squares, the streets being wide, straight and well drained





TWO PANORAMIC VIEWS OF THE CITY OF LYONS, FRANCE,

The upper illustration (across both pages) shows the hill of Fourvière, with the Cathedral of St. Jean on the slope and the Church of Notre Dame de Fourvière near the summit, with the Palace of Justice below it in the foreground





FAMOUS AS THE FOREMOST SILK MANUFACTURING CENTER IN THE WORLD

The lower picture (across both pages) shows the wonderful panorama of the city as seen from the top of La Fourvière, showing the magnificent quays facing the rivers Rhône and Saône. On a clear day this view extends to the Alps and the Cévennes



THE USE OF DYNAMITE FOR DITCHING

A New and Rapid Method of Draining Wet Lands
and Making their Agricultural Richness Available

Illustrations loaned by Du Pont Powder Co.

THE rapidly expanding domestic and foreign demand for American foodstuffs makes imperative the growing of an increased acreage of grain. There are large areas of rich, low-lying lands that have remained untilled owing to their marshy nature. These offer some of the few great undeveloped agricultural possibilities that still await utilization.

Estimates show that there are 75,000,000 acres of wet land in the United States, most of which can be reclaimed. If we add the enormous number of acres already under cultivation, but yielding poorly on account of bad drainage, these figures will be more than doubled. There is no region of this character that cannot greatly increase its production of grain by adopting better drainage.



When a section of the ditch is blasted the column rises far above the treetops

As the demand for larger crops is immediate—not one that can await the ordinary progress of events—haste is imperative. Ditches must be dug to afford the needed drainage. How to construct these ditches in the quickest way has become a matter not only of thought, but of practical application. Labor is plentiful, but the magnitude and difficulties of the work are so great that the pick and shovel are too expensive and inadequate to accomplish much. Heavy digging machinery does wonderful things, but is not always adapted to this class of work.

The newest and fastest method of ditch digging is with dynamite. Using this explosive it is possible to undertake the most difficult task of ditching and finish it with the greatest possible dispatch. Adverse conditions, such as wet and swampy soils, stumpy land, extreme heat or cold, and even solid rock, offer no difficulties that cannot be well and quickly overpassed.

The action of dynamite and its methods of use to secure the best results in ditch digging are now being better understood. One, two or three lines of holes punched along the line of the ditch and loaded with dynamite of the proper kind and strength will result in a ditch varying in width from 5 to 20 feet, and in depth from 2 to 6 feet. The size of such ditches is regulated by the depth of loading and by the quantity of explosives used, and can usually be made to conform to the dimensions desired. The excavation is complete, and, except in rare cases, no



View of right of way, showing men placing the dynamite that will dig the ditch

hand or scraper work is required to complete the ditch.

One of the greatest advantages of ditch blasting is the short time in which the work can be done. A trained working crew should be able to blast from one-fourth of a mile to a mile of ditch in a day, according to the character of the soil.

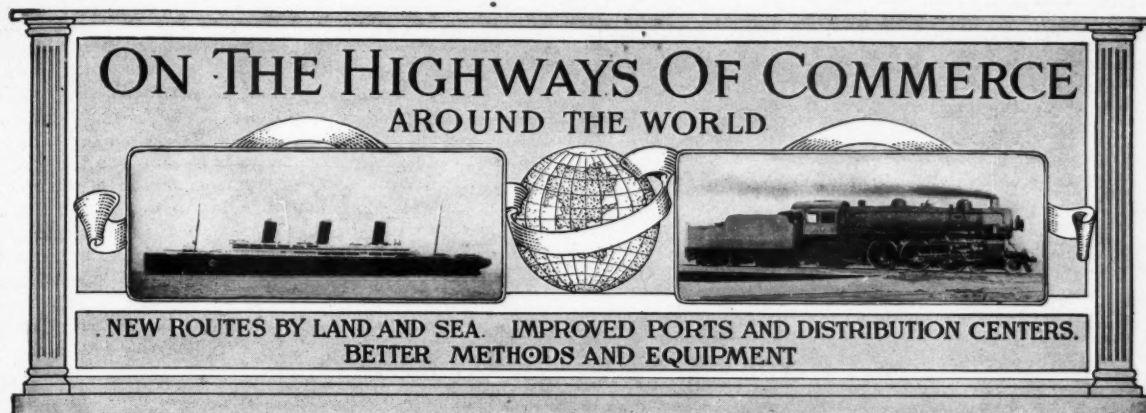
The cost also varies with the conditions encountered. Moist and wet soils are cheaper to blast than are dry soils



A completed ditch, 9 feet wide and 5 1/2 feet deep, that has been excavated by explosives

and sand. As compared with hand labor for small and medium-sized ditches, it is usually from 20 to 60 per cent. cheaper.

The use of dynamite for drying the wet lands and making them more productive in this way can be made an important factor immediately in solving drainage problems and in increasing the wealth of the nation and of the individual, because it will convert waste lands into fresh, fertile farms.



SHIPPING MOVEMENT VIA PANAMA

The First Sailing Vessels via this Waterway—The First Japanese and French Steamers to go Through

THE average time of transit for steamships from United States Pacific Coast ports to England is now about one-half what it was before the opening of the Panama Canal. Grain ships arriving at British ports from August, 1914, to March, 1915, from San Francisco, Portland (Oregon) and Puget Sound, averaged 48 days for the voyage. Of 27 voyages, the shortest was 34 days and the longest 88. Only 3, however, exceeded 54 days.

Most of the grain exported from the Pacific Coast is now carried in steamships. Last year the bulk of it was transported in sailing vessels, whose voyages to British ports averaged 136 days. Of 22 cargoes, the shortest time of transit was 102 days, and the longest 171 days.

Sailing vessels, however, are beginning to use the Canal. The first from the Pacific Ocean was the *Springbank*, a Norwegian four-master which arrived in the outer bay at Balboa, March 4, in tow of the steamer *General Hubbard*. The *Springbank*, laden with a cargo of barley for Copenhagen, left San Francisco, February 6. It is estimated that by using the Canal this sailing vessel will shorten her voyage from the North Pacific to Europe by some 80 days, and that, despite the \$2,700 Canal tolls, the purchasers of the cargo will reap a decided benefit by making use of the shorter route. The first sailing vessel to come under tow to the Canal from the Atlantic was the old prison ship *Success*, from Philadelphia, December 31, bound for San Francisco. This boat, built more than a century ago, was sunk for years in Sydney harbor. Since it was raised it has been exhibited for several months both in

London and New York as a unique historic relic of days long gone by.

The first Japanese steamer through the Canal was *Tokushima Maru*, westbound for Yokohama, completing her trip around the world. The first French vessel through was the merchant steamer *Saint André*, which passed, March 16, from Tahiti to Glasgow with a cargo of 6,800 tons of ores. This boat was built at St. Nazaire in 1912 for La Compagnie Navale de l'Océanie, which has since operated the vessel principally in the Pacific trade.

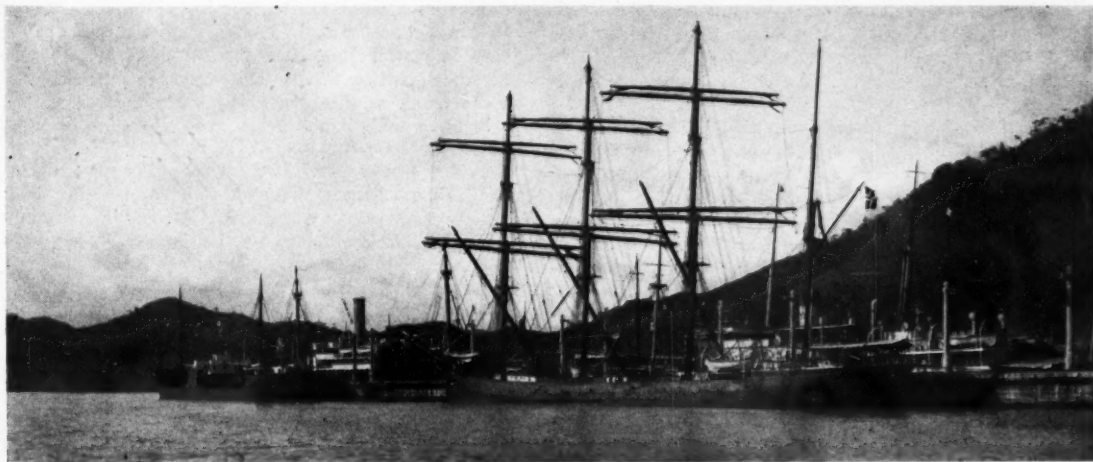
No official recognition is taken of the passage of the first vessels of foreign nations making use of the Canal, but at points along the way there are always assemblages of individuals who indicate their appreciation of the event.

Arrangements for furnishing fuel oil to vessels at the two entrances of the Canal have now been brought to a state which is ample for the demands, and will be extended as occasion arises. Oil is sold both by the government and by private corporations.

The storage capacity at Balboa, which is the principal point of loading, is 220,000 barrels of fuel and 37,000 barrels of Diesel oil. The fuel oil storage at Cristobal is 195,000 barrels. The oil is all of American production, and of a grade that meets the technical requirements and standards of the American Government.

Postage stamps of a special issue, commemorative of the opening of the Panama Canal, were placed on sale at the Canal Zone post offices March 1. They are part of the special 1915 issue of the Republic of Panama. The design of the 1-cent stamp shows a relief map of the Panama Canal; the 2-cent stamps have a picture of Balboa "taking possession" of the Pacific Ocean; the 5-cent stamps show the three levels of the Gatun locks, looking upward from the North, and the 10-cent stamps show Culebra Cut near

The Norwegian four-master "*Springbank*" in the Pedro Miguel Lock. The "*Springbank*" was the first sailing vessel to pass through the Panama Canal from the Pacific to the Atlantic. She came from San Francisco and was bound for Copenhagen with a cargo of barley
Courtesy "Shipping Illustrated"



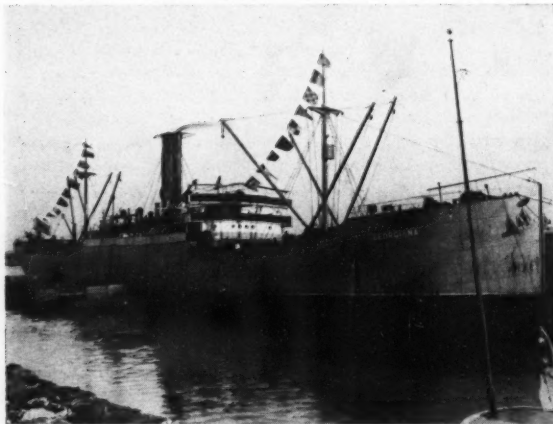
the Empire suspension bridge after the water had been let into the cut, but before the bridge had been removed. The colors of the stamps are respectively green, red, blue and orange. The Government of Panama furnishes the stamps for the Canal Zone postal service and receives for them 40 per cent. of their face value. Steps have been taken to prevent collectors from purchasing more than 100 stamps of each variety, and to see that everyone is given an equal chance to buy them.

RECENT CHANGES IN THE SHIPPING SITUATION

Unprecedented Activity in the Selling and Buying of Steamers—New Services Established

OWING to the comparative scarcity and to the great demand for ocean steamers, the market for vessels is unprecedentedly active. It is reported that in Norwegian shipping circles alone, recently, a hundred vessels were bought and sold. Often the buyers are able to resell quickly at a substantial profit. In order to save the delay of correspondence many of these transactions are conducted by long distance telephone.

In the British markets the sales of late have made new high records. Steamers of around 4,000 tons gross, built within the last five years, command the highest figures. In Liverpool recently a steamer of 3,840 tons gross, built



One of a fleet of four vessels owned by Walker, Armstrong & Co., Savannah, Georgia, purchased since the war began, loading with cotton at Savannah

in 1910, changed hands at £60,000, or an equivalent of nearly £16 per gross ton. In the Glasgow market, a steamer of 4,662 tons gross, built in 1906, was sold for £69,000, or at the rate of nearly £15 per gross ton. Another Glasgow transaction was a steamer of 4,904 gross tons, built in 1907, which fetched £72,000, or about £14/14 per gross ton. A number of sales of older boats have been made at prices which figure out around £10 per gross ton. The minimum recently was a boat of 2,070 gross tons, built in 1888, which changed hands at £15,000 delivered in Leith, equivalent to a rate of a little more than £7 per gross ton.

A recent ruling of the British Admiralty allows French shipowners to bid for steamers captured as prizes of war on the same terms as British shipowners, namely, on paying cash 25 per cent. of the purchase price, the remainder being settled by instalments spread over three years. According to a bill presented to the French Chamber of Deputies in March, the French Government guarantees the payment of the 75 per cent. of the purchase price of such ships to be paid in instalments.

Owing to the very limited supply of tonnage, ocean freight rates continue very firm, and in some trades have reached the highest point since the outbreak of the war. Cotton rates from American Gulf ports ranged, at the end of March, from 120 to 125 shillings. From Galveston to France considerable tonnage was required for the transport of horses, the rates being from £17 to £18 per head.

Sir George Foster, Minister of Trade and Commerce, recently stated in the Canadian Parliament, according to *Shipping Illustrated* (New York), that the British Government had requisitioned most of the subsidized steamships belonging to lines operating regularly from Canadian ports. The whole Canadian Pacific Railway fleet, he said, had been reduced to three cargo boats and one passenger vessel. The White Star Line had only one vessel in service, and the Allans only smaller vessels on the route. Considerable tonnage from the Great Lakes, he thought, would be chartered for the Atlantic service, but this would not be able to take the place of the big ocean freighters. An arrangement was being made by which large vessels would be released by the British Government taking over smaller vessels, and on May 1 the Canadian Government expected to have the whole of its subsidized fleet back in the service.

In other parts of the world, particularly those far distant from Europe and America, governments and shipping interests have been active in arranging for the sea transportation of their commodities and other merchandise. The Western Australian Shipping Association, for example, are reported to have entered into an agreement with the Commonwealth & Dominion Steamship Co. and the United States & Australasia Steamship Co. for a regular service between Western Australia and American ports on the Atlantic Coast.

The Japanese Foreign office recently issued a statement regarding a new port of call for the Nippon Yusen Kaisha steamers on the Australian run. The resources of the southern Philippines, says this statement, both in natural produce and industry, have made considerable headway of late, but facilities for communication have remained inadequate. Both the American authorities and the Mindanao public were anxious that this line's Australian steamers should call at Zamboanga for the transport of emigrants and the shipment of copra and other products of the islands. This change went into effect February 21.

This same line—the Nippon Yusen Kaisha—also maintains a regular service between the Orient and British Columbia and Puget Sound ports. Owing to the withdrawal, due to the war, of so many steamers visiting these ports, the demand for tonnage has been so great that this Japanese company has ordered 12 new steamers of about 7,500 tons each. They are now being built in the yards at Kobe and Nagasaki.

The Nippon Yusen Kaisha line also has inaugurated an unsubsidized service via the Panama Canal, and proposes thoroughly to test the new route with a fine fleet of cargo steamers, several of which are now nearing completion. These also will be of about 7,500 tons register. One vessel of the fleet, the *Tokushima Maru*, has already made the trip through the Canal westbound. It left Yokohama, July 17, and returned to Yokohama, January 16, after having made the entire trip around the world. It is said that this Panama service will be a continuation of the European service.

This line also has recently instituted an auxiliary service between Yokohama and London, via the Suez Canal, operating in conjunction with the regular passenger boats. It is the intention of the company to dispatch the vessels of the extra service, following their arrival at British ports, to New York, and subsequently through the Panama Canal.

Another Japanese line, the Osaka Shosen Kaisha, has two 17-knot steamers under construction for delivery next July, when they will be put in service between Japan and British Columbian ports, calling at Manila on both the inward and outward voyages.

The Toyo Kisen Kaisha, still another Japanese line, announce that their South American steamers will call at San Pedro (Los Angeles), California, on their outward voyages, and at Balboa (Panama), on both outward and homeward trips, in addition to the usual ports of call as heretofore. This marks the beginning of the first regular services to link the Orient with Southern California, and to establish connections with numerous liners through the Panama Canal to the American Atlantic ports and Europe.

THE WORLD OF FASHION

NEW TENDENCIES IN THE SEASON'S STYLES

Recent Style Shows in New York—
The Trend in Design and Coloring

THAT there would be no spring or summer fashions from Paris this year was the general impression some three or four months ago. Yet, despite the war and its far-reaching consequences, the model gowns from the French capital that were shown in the recent *promenades des toilettes* in the great New York establishments where they have been a feature were no less elegant and elaborate this season than in past years.



Courtesy Gimbel Bros.

A chic walking costume designed by Mme. Jenny. Note the yoke effect and high girdle characteristic of this designer's latest models

A style show of this description resembles, in many respects, a theatrical performance. Similar influences determine the success of both events. The participants must use skill in carrying out their respective parts, the costumes and garments must be carefully selected and assigned to those who can wear them most becomingly, and the stage effects and decorations must be in pleasing harmony with the many and varied colors for which they are the setting.

The stage which is the scene of the *promenade* is a raised platform as broad as the pavé of a Paris boulevard, and of such length that it takes each of the two or three score *mannequins* perhaps ten minutes to lounge or drift or glide from one end to the other and back again. As the models pass along before the closely-packed audience, they now and then throw back a coat or lift a skirt to show some claudesine charm of lining or blouse or

pocket. Often, as they walk between the vine and flower-decked pillars and pergolas that mark the boundaries of their broad pathway they stop short and wheel about to display more fully the art of their apparel.

The spring and summer fashions that have thus far been shown are unusually composite. There are notes that are reminiscent of nearly a century ago, bits that date from the vogue of 50 years later, and here and there is struck a striking military chord that is decidedly of the present hour. The first of the season's great style shows was characterized by the establishment that offered it as fashion's exemplification of "The Spirit of Youth."

The prevailing modes in skirts are, however, in perfect accord in one important detail: skirts are shorter than they have been for many seasons—from five to nine and even ten inches above the ground. Otherwise considerable differences of opinion are expressed in the apparel from Paris as well as in that of American creation. One of the great Parisian modistes insists upon the comparatively narrow skirt; still another, quite as eminent, puts a full transparent skirt over a narrow one; while a third, just as famous as the other two, goes to the maximum circumference around the hem. Notwithstanding these typical variations, the wide, short skirt is being accepted almost universally by the majority of women who buy and wear the fashions that others create. These, apparently, have arrived at the obvious conclusion that all women do not look equally well when dressed in exactly the same style, and that the designers should seek to clothe the many instead of the few—that they should create fashions instead of a fashion. Therefore the present tendency, in New York and other large American cities, is for the creators of styles to design models in such variety that women of



Courtesy Gimbel Bros.

A dancing frock by Mme. Paquin. Note the rose trimmed skirt that is somewhat wider than seen in most of the recent creations from Paris

every height and weight may be arrayed with the apparel that is most becoming to their figures.

Among the smartest suits, at present, are those which have the skirt with the uneven hem. Sometimes this is brought about by a deliberate cutting away of the material on one side, but usually it is accomplished by an overlapping of sectional gores or plaits in such a way as to give a very graceful uplifted contour to one side or to

the front or back. This achieves the effect of a full skirt that still manages to retain slender lines.

Everywhere the yoke is predominant. The very deep yoke is disappearing, and the narrow yoke—its successor—is variably shaped. One advance model gown from Paris has the yoke cut rather deep in front and drawn up in a semi-draped suggestion through a flat buckle of the cloth at the back, the slashed ends of the yoke giving a tab-like termination. Another scheme of yoke accommodation from Paris has the skirt slashed below the yoke to form a sort of box plait band lifted over the yoke and either caught in with the band at the top or finished with a pointed edge adorned with buttons. Still another idea shows the skirt fastened at the sides, the opening extending to the hip line, and ornamented with satin loops that simulate buttonholes and satin buttons.

Among the seemingly little things which really are important features is a new method of lacing up a frock in the middle of the back. It is done by a velvet cord through large round buttonholes that are heavily overcast. At the end of the cord are short spikes of cut jet. This idea has been adapted to several models besides the afternoon gown. Even in linen frocks it has proved to be an attractive feature. Still another new device—or revival of an old one—for fastening the gown is the use of comparatively immense hooks and eyes covered with a material in the same color as the frock or to contrast with it. These are used in front or back, but preferably in front. On a gown of black silk they are covered with white satin, and there are white satin collar and cuffs to carry out the color scheme.

The phrase "silent colors" expresses tersely and well the Paris color tendency for spring. Blues of the deepest navy shades are a strong feature, and there are hues of red, plum, brown and green that in many instances are so deep in tone as to be almost indeterminate in their coloring. Neutral shades of a decidedly darker character than

those previously used are seen in the suitings. Among these is the *bleu soldat*—the blue of the French army's new field uniform: a sort of dull gray blue that suggests utility rather than beauty.

The newest shades of tan are also deeper in tone than any that have preceded them in several years. They are so obviously practical for autumn that manufacturers both in America and France are said to be making a feature of them in their new weaves.

The latest models of evening dresses from across the Atlantic are sombre in color compared with those of the Paris creations a twelvemonth back. The shades of blue are soft and indefinite—not always distinctly blue, but faintly tinged with green. All the tones are subdued.

For tailored suits the indications are that the autumn fabrics will include more of the soft, lightweight vicunas than of the hard twisted worsteds that were popular last year. Wool etamines and voiles, coarser and heavier than those previously employed, and in navy blue and black, are also characteristics of the trend of fashion abroad. The same shades are also preferred in silks. Another feature is the general use of combinations in fabrics—the use of two fabrics in colors that match. In these also the favorite colors are black and dark blue.

Another fashionably important color is "Belgian blue," a brighter shade. It is the rich blue used as a trimming on the Belgian uniforms, and already has been adopted as a novelty. In velvets, browns—in the very deep tobacco shades not far removed from black—also are popular. In greens, myrtle—as dark as possible—for street wear, and Nile for evening wear are favorably regarded. Of the many tones of red the shades of fuchsia are popular both in New York and Paris.

The recent fashion shows, in the opinion of many of the spectators, emphasize the fact that the products of American fashion designers compare very favorably with the recent outputs of the *ateliers* of Paris. The American

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




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creations show much originality in the adoption of various period styles and the creation of new ones. And not the least important phase of these fashions is the use of American textiles in silks, cottons, woolens, voiles, etc., and the unusually artistic showing of American-made hats, parasols and gloves.

Still another apparel feature that should not be overlooked by merchants abroad who are looking to the American market for their supplies is the American corset. The manufacturers of this article have not attained their pre-eminence in that line by chance. It has been the result of many years of study and the application of the highest skill, both in designing and in manufacturing.



Courtesy Gimbel Bros.

An afternoon costume by Callot Socars—an example of the "composite" style employing two fabrics of different design

Generally speaking, these corsets are designed on lines that conform to the natural silhouette of the feminine figure, and combine not only hygienic outlines, but fashionable ones also. The fabrics are light in weight, bonings have been reduced to a minimum, and there are many types or models to choose from. It is no longer necessary for a woman to go to a corset maker to get something suited to her individual figure. The average retail shop offers to-day as wide a range as the specialist used to.

Formerly, all the best corsets came from France, but now the majority of the most satisfactory models are made in America and are exported not only to Europe, but to all countries in the world where corsets are worn. One reason for this change is that in France corsets are either very expensive or very cheap, and there is a dearth of medium-

priced models. In the United States, where the largest buying class is composed of women of average means, the medium grade corset has received particular attention from designers and manufacturers. Women all over the world, as a consequence, have shared in the benefits.

To-day's styles in children's clothing are adaptations of the youthful simplicity of the present in grown-up lines. In the selection of the outfit for a little girl there are now as many outside coats to choose from as there are for her elder sister. There are short coats of rough material on simple tailored lines, school coats of serge with fancy pockets and with taffeta collars and cuffs and revers, and "best" coats of silk or taffeta, with embroidered collars and cuffs, for juvenile social occasions.

Taffeta and net are combined into picturesque little models with Empire waist lines and flounced edges. Most of the summer batiste dresses have a high waist line. Perforated embroidery is not so much in evidence as usual. The set-in sleeve is more used in children's dresses and coats than the kimono cut which was popular last season. In wash dresses, such as chambrays, ginghams and linens, many suspender and bretelle top finishes are in evidence in the latest showings.

The merchants who are paying particular attention to the organization and development of their children's wear departments should not overlook waterproof garments



Photo by Joel Feder, New York

Two dainty school frocks: one of rose linen; the other of brown and blue plaid gingham

in making their selections of outer apparel for juveniles. There is no season of the year in which such wraps are not in demand in the temperate zones, and in the tropics, during the rainy period, they are a necessity.

Waterproof garments for children are also much in demand in countries where there is much rain or snow at certain seasons of the year. In the production of rubber coats and rubber suits, as well as fabrics that have been rendered more or less impervious to moisture, American manufacturers excel. Practically all the school children of all ages wear rainproof garments in the regions, such as Norway, for example, where the climate is especially moist. The same clothes answer for both school and play garments.

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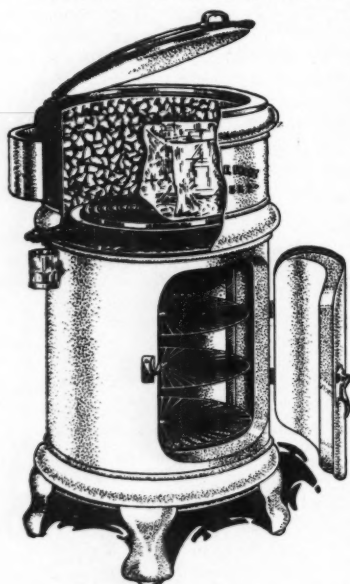


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The two most important things about a refrigerator are the insulation of the ice and the circulation of the air.



The interior parts of these refrigerators can be removed or replaced in one minute

Ice, like electricity, loses its force unless it is walled in by insulation. Insulation, as applied to ice, concentrates and conserves its cold. Unless a refrigerator is properly constructed in this regard, a low temperature is not achieved or maintained. There are many methods of insulation, and new materials that are greater non-conductors of heat and cold are constantly being sought for and employed in the improvement of refrigerators to bring them nearer and nearer perfection. The most modern American refrigerators, therefore, represent a great advance over those of even ten years ago.

This progress has been attained by unrelenting study and scientific experiment and the application of lessons learned through long practical experience.

Some refrigerator manufacturers lay much stress on the subject of "scientific circulation," but others state that their experience is that there is no such thing as scientific circulation when any law of Nature is infringed upon, except when some auxiliary appliance is brought into operation. Cold air descends and hot air rises. It is impracticable to incorporate an electric fan in a refrigerator to blow the cold air in a contrary direction. It has been found better to co-operate with Nature and provide suitable openings for the cold air to drop from the ice directly to the bottom of the provision chamber, and also to provide certain flues and channels for the air to return to the ice again after it has risen in temperature on passing through the provision chamber. By using, for example, two partitions between the ice and the provisions, with a small air space between, condensation forming on the ceiling of the

provision chamber is prevented, and the atmosphere remains pure and dry at all times.

In the most improved American refrigerators special attention is paid to sanitary appointments. It is essential that the refrigerator should be kept clean and sweet. Therefore it must be constructed so that the shelves can be removed easily and leave the interior spaces so they can be washed thoroughly and quickly. This is one of the most attractive and important features of the best modern refrigerators.

Although refrigerators reduce the consumption of ice, they are favorably regarded by ice manufacturers and distributors. It has been found that in every community where the advantages of the general use of ice and of refrigeration have been adequately presented, the sales of refrigerators and of ice have kept step with one another.

Especially in the tropics, where ice has to be produced artificially, merchants have found American refrigerators a very profitable line. In their introduction the best results have been attained by practical demonstrations either in the show window or in some other prominent place in the establishment. Once the advantages of a first class refrigerator become generally recognized, a steady and permanent demand is created.

PIANO PLAYERS POPULAR

The Factors that have made these Instruments of
American Manufacture Known Around the World

NEARLY every person who has "an ear for music" has also a desire to learn to play the piano or some other instrument. Comparatively few, however, have the time or money to acquire a thorough musical education. Until the invention of the automatic, or "player" piano, these people were deprived of a great deal of enjoyment that is now within their reach.

Few persons realize the tremendous growth of the piano manufacturing industry in the United States in the last few years. More than 300 large concerns are now engaged in it, and their products are exported to every part of the world. One feature of the American piano, with or without the player attachment, is that it is particularly adapted to withstand severe climatic conditions. It is strongly and simply made and the materials and mechanism are simple and durable. Fully as much attention has been paid to the artistic as to the mechanical features. Depth and richness of tone, even after long use, are characteristic of the best makes.

New York City and the States of Illinois and Massachusetts are the principal centers of this industry. More than 90 per cent. of the pianos now manufactured are uprights. Of these about 20 per cent. are equipped with player attachments. Of the pianos manufactured in New York the percentage is much greater, nearly two-thirds of those produced being for or with such attachments.

The advantages of the player piano are so obvious that they require no more than a passing mention. By means of very complicated mathematical computations the notes and phrasing are translated from their printed or written symbols into a long perforated sheet of tough paper. This is run through the piano player attachment and produces the music which is played with all the correctness and beauty of expression that could be given it by a great artist. The person sitting at the instrument can control the phrasing and interpretation of the piece that is being played—can put his own spirit into it as much as if he were actually touching the keys and directly producing the notes. This feature, in itself, has done much to make the player piano widely popular, and to raise the standards of musical taste and appreciation everywhere.

The American player piano is now found even in the most remote places—like the American sewing machine. It furnishes enjoyment in countless lonely spots, such as mining camps, plantations, ranch houses and other places that are so far distant from the towns and cities that good music otherwise would be impossible to hear.

World Commerce and Trade Conditions

JAPAN'S PLANS FOR WORLD TRADE

A Commercial Commission to Seek New Markets and Business Openings

WAR may be raging in Europe, and its effect may be felt on the industry and commerce of the whole world, but Japan very wisely recognizes that nothing can be lost by trying, and that much may be gained. The Japanese Department of Agriculture and Commerce has made arrangements to send a party of commercial commissioners to study the conditions of markets for Japanese products and manufactures in the United States, Canada, Australia, Russia, China, British India and the Dutch East Indies. It is understood that merchants and manufacturers of standing will accompany the commissioners with samples with the idea of opening up connections on the spot.

It may be that in the present condition of the world's trade little actual business will be arranged for as the immediate outcome of the tour, but a foundation will be laid for future activities when the world returns to the normal again, which will be all in favor of Japan. It is recognized that in many countries the supply of commodities has been stopped as a result of the war, and that in quite a number of cases Japan can step into the shoes left empty by Germany and Austria.

The department, indeed, has gone so far as to arm the commission with what facts are already available as to the classes of manufactures which are most likely to be acceptable in the various countries included in the itinerary. Thus, in the United States, Japanese manufacturers are advised that they will probably find a good demand for raw silk, habutae, silk fabrics, manufactured silk goods, porcelain wares, brushes, shell buttons, knitted goods, metal wares, provisions and toys; for Canada the list includes silk fabrics, copper wares, canned provisions and porcelain goods; for Australia, silk fabrics, copper wares, knitted underwear and socks, handkerchiefs and table cloths; for Russia, silk fabrics, manufactured cotton goods, and porcelain wares; for China and the Dutch East Indies, cotton yarn, cotton goods, toilet articles, enameled iron ware, glassware, stationery, provisions, land and marine products, knitted goods, hats, patent medicines, paper, surgical instruments, umbrellas, beer, and Hirana water; and for British India, silk yarn, manufactured silk goods, knitted goods, glassware, matches, leather goods, rubber goods, umbrellas and candles. Such lists are, of course, only suggestive, and they should be materially added to during the tour, but they are sufficient to indicate the scope of the Japanese aspirations in regard to the world trade it is seeking.—*British Export Trade Gazette*.

SUPPLYING FUEL OIL TO ENGLAND'S FLEET

War Vessels Replenish Fuel Bunkers at Sea at Ten Knots an Hour

THE battleships of "Queen Elizabeth" class exclusively rely upon oil fuel; 16 light cruisers, over 100 destroyers and a large number of torpedo boats also derive their power from the use of oil, while the major portion of the remainder of the British fleet is now fitted to either consume coal or oil. It is therefore of the utmost importance that these vessels shall have facilities for re-fueling at sea.

The British Admiralty possesses quite a fleet of oil

tankers of their own, whose duty it is to transport bulk oil fuel from the exporting ports of the oil-producing countries and attend upon the various units of the fleet at sea for re-bunkering purposes. The method of re-fueling at sea has been perfected to such a degree that to-day the majority of the battleships and cruisers fitted to burn oil fuel take on their necessary supplies when steaming—a marked advance upon the old method of coal bunkering, and even far superior to the somewhat intricate system still largely adopted of re-coaling by means of a reciprocating cable way apparatus. The British Admiralty in fact requires a towing speed of at least 10 knots per hour while re-fueling at sea, but experiments in re-fueling with oil from the government's oil tanker "Petroleum" have frequently been carried out in the open sea when steaming at more than 12 knots per hour.

When a battleship takes on oil under steam, one hawser tows the tanker, while a secondary line supports the petroleum hose by hangers at certain distances one from another. In the case of the oil tanker "Petroleum" 900 feet of five-inch diameter flexible metallic hose is carried, the total weight of which is approximately three and one-half tons. While re-fueling is in progress, the distance between the oil tanker and the battleship is about 600 feet, the greater portion of the hose dragging in loops in the sea. By this method it is possible to transport from the tanker to the vessel taking on the oil fuel nearly 100 tons of fuel per hour.

Another system which recently has found much favor is one in which the oil hose is supported by means of a cable marine way in such a manner that the hose simply takes a bending line from the tanker to the battleship. There are therefore no sharp bends in the hose, and as a consequence its life is materially lengthened, while by this method it is possible to carry on oil bunkering in heavy seas. An automatic tension engine furnishes the necessary elastic medium for paying out and taking in the supporting cable as demanded by the motion of the ships.—*Petroleum Review*, London.

NATIONALITY OF AMERICAN COMMERCE CARRIERS

Marked Changes in Flags of Ocean Freight Carriers as a Result of the War

The following memorandum, which shows the aggregate value of the water-borne commerce of the United States (imports and exports) in the fiscal year ended June 30, 1914, and in the first half of the current fiscal year (July 1 to December 31, 1914), with the proportionate amount carried in vessels of the principal nations, is furnished by the Secretary of Commerce:

Flag under which carried:	Value of water-borne commerce		Percentage	
	Fiscal year 1914.	July- December, 1914.	1913-14.	1914.
American	\$368,360,000	\$234,000,000	9.26	14.09
British	2,023,340,000	872,581,000	53.45	52.54
German	522,137,000	50,803,000	13.79	3.06
French	175,501,000	76,988,000	4.64	4.64
Dutch	155,064,000	97,985,000	4.10	5.90
Norwegian	132,028,000	100,209,000	3.49	6.03
Japanese	80,963,000	44,053,000	2.14	2.65
Italian	73,442,000	51,505,000	1.94	3.10
Austrian	59,445,000	3,873,000	1.57	.23
Belgian	47,966,000	7,791,000	1.27	.47
All other	147,223,000	120,964,000	4.35	7.29
Total	\$3,785,469,000	\$1,680,761,000	100.00	100.00

A similar analysis for the month of December, 1914, the latest month for which details are available, gives the following results: Total imports in vessels, \$102,040,876, of which \$16,771,000, or 16.4 per cent., came in American and \$43,669,000, or 42.8 per cent., in British vessels, the remainder being in vessels of other nationalities; total domestic exports in vessels, \$221,193,000, of which \$20,350,000, or 9.2 per cent., went in American and \$128,112,000, or 57.9 per cent., in British vessels, the remainder being in vessels of other nationalities; total water-borne commerce, month of December, 1914, \$323,234,000, of which \$37,121,000, or 11.5 per cent., represented the value carried in American vessels and \$171,781,000, or 53.1 per cent., in British vessels.



EXPLOSIVE MOTOR ENGINES

THE explosive motor using gas, petrol or crude oil as fuel is the most important motive power development of this generation. So rapid has been the expansion of its field, that books describing the designs of engines, their manufacture and management have to be revised and brought up to date almost from year to year.

The 21st edition of a complete, practical work* that defines clearly the elements of internal combustion engineering has just been published. It treats exhaustively of the design, construction and practical application of all forms of gas, gasoline, kerosene and crude petroleum oil engines, and describes minutely all auxiliary systems, such as lubrication, carburetion and ignition. It also considers the theory and management of all forms of explosive motors.

*GAS, GASOLINE AND OIL ENGINES, by Gardner D. Hiscox, M. E. Revised, enlarged and brought up to date by Victor W. Page, M. E. Published by Norman W. Henley Publishing Company, New York. Price, \$2.50 net.

INCREASING EFFICIENCY IN MANUFACTURING

WHY greater efficiency should be sought in industrial plants has been ably argued by many writers. Few experts, however, have pursued the line adopted by C. E. Knoepfel in his latest work*—of describing what the actual methods are that experience has proved will increase the efficiency of a manufacturing concern, and how they are put into effect. All existing expositions and theories are supplemented by a circumstantial recital of practice. The purpose of the work is "to give wholly frank and thoroughly practical working instructions and explanations, covering the entirety of efficiency practice, as tested and proven in many important and successful undertakings carried out by the author."

*INSTALLING EFFICIENCY METHODS, by C. E. Knoepfel. Published by The Engineering Magazine, New York. Price, \$3.00.

THE MEXICAN REVOLUTION

WHILE it is obviously much too soon for an adequate history of the revolution in Mexico which overthrew the government of ex-President Huerta to be written, the student of current events in that Republic will find much interesting material in the new book on Carranza which has just been written by Carlo de Fornaro.* The work includes a short sketch of the career of General Carranza, a very interesting account of the rise and fall of Madero, and a general outline of the campaigns in the West, North and South that finally resulted in the overthrow of Huerta. The book also contains chapters on General Carranza's foreign policy, President Wilson's Mexican policy and an interesting glossary of Spanish words frequently used in connection with Mexican affairs. There are several portraits and a map.

*CARRANZA AND MEXICO, by Carlo de Fornaro. Published by Mitchell Kennerley, New York. Price, \$1.25 net.

A NEW VIEW OF MANAGEMENT PROBLEMS

THE formulation of some approach to a true science of management has become a necessity of modern industry. The administration of almost any large concern is usually more or less of a trade secret among its executives. The lessons they learn through years of experience are not available for the guidance of others. They have to be rediscovered or relearned again and again.

The latest of the few works that have appeared on this subject is by A. Hamilton Church.* The author attempts, in a scientific way, to get at the fundamental elements and principles so that existing forms of management can be scientifically analyzed and classified. His work is not one from which the "rule of thumb" practitioner can extract a ready-made system and put it into his plant, but it is one which the real student of management is likely to read with profit and find permanently useful.

*THE SCIENCE AND PRACTICE OF MANAGEMENT, by A. Hamilton Church. Published by the Engineering Magazine, New York: \$2.

PRESENTING FACTS BY MEANS OF CHARTS

THIS volume* represents an effort to produce a work that can serve as a handbook for those who occasionally have to prepare charts for reports, magazine illustrations or advertising, and the author has taken so much care and displayed so much ingenuity in its arrangement that it cannot fail to be of great assistance to those having any work to do of this nature. The text is written

in the plainest of language so that a technical education is not necessary to understand it and so many examples are given that the owner can doubtless find a chart that can be adapted to any possible requirement. The custom of presenting statistics, reports and other data in such shape as to allow an immediate comparison to be made is steadily growing, and no better method by which this can be done has yet been devised than through the medium of a properly prepared chart. The book contains 371 pages and 255 illustrations, and will be a valuable addition to the library of the statistician, draughtsman, editor or busy executive.

*GRAPHIC METHODS FOR PRESENTING FACTS, by Willard C. Brinton. The Engineering Magazine Company, New York. Price, \$4.00 net.

THE CAUSES OF THE GREAT WAR

IN this timely and instructive little volume* the author discusses the causes which have led up to the war between these two countries. The book possesses considerable authority, because of the fact that the author, writing fifteen months before the outbreak of hostilities, discerned the symptoms of a great conflict. Professor Cramb is profoundly learned in German literature, history and thought. He shows how far back the motive for this conflict lies and gives the English side of the question and the reasons why the present crisis has arisen.

*GERMANY AND ENGLAND, by J. A. Cramb, M.A., late Professor of Modern History, Queen's College, London. E. P. Dutton & Co., New York. Price, \$1.00 net.

COTTON FACTS

THIS leading cotton statistical manual*, now in its 39th year, should prove indispensable not only to the cotton merchant and spinner, but to everyone interested in the great southern staple. While the European war has necessitated the omission of some information of minor importance, the October, 1914, edition is, nevertheless, even more complete and valuable than ever before. Besides the usual records giving the size of the crops, the highest and lowest prices and the general movement for a great number of years, a feature of the present issue is the attention and space devoted to the influence of weather conditions on cotton production. In this connection, a code is appended with a view to facilitating cable communication on weather conditions between observers in the United States and their European correspondents. A very comprehensive index enables one to find practically everything relating to the cotton industry without loss of time.

*COTTON FACTS, published by the Shepperson Publishing Company, New York. Price \$1.00.

LATIN AMERICA

UNDER this title* have been published a series of addresses delivered at Clark University, Worcester, Mass., U. S. A., in November, 1913. They have been edited and prepared for publication by Prof. George H. Blakeslee, Professor of History at the University and constitute a most interesting symposium on this subject. The papers include one on the Contrasts in the Development of Nationality in the Anglo and Latin-American, by Señor Pezet, the Minister to the United States from Peru, one on Pan-American Possibilities by John Barrett, several able discussions of the Monroe Doctrine and a number on the Mexican Situation, which even at that date had become acute. Other contributions to the series discuss a wide range of topics connected with Latin America, including commercial questions, such as the effect of the Panama Canal in promoting closer trade between the United States and the West Coast of South America and the Advantages of making the Canal Zone a Free City and Free Port; historical discussions; educational studies, etc. Altogether, the man who is interested in this important part of the world will find much in these 29 addresses to interest and instruct him.

Another valuable book with the same title as the foregoing has just been added to the Home University Library by Messrs. Henry Holt & Co.,* while Messrs. Williams & Norgate of London have issued it under the title of "Central and South America." This work is by Prof. William R. Shepherd, Professor of History in Columbia University, New York, and a widely recognized authority on Latin-American history and civilization. It is divided into two parts, the first treating of the colonial period and the second of the Republic. In the former the author discusses briefly the governmental systems of Spain and Portugal as applied to their American possessions and describes the social organization and economic conditions that prevailed prior to 1821. In the second and larger part of the book are chapters on such subjects as industry, commerce, transportation, education, journalism, literature and the fine arts. The book as a whole forms a most instructive handbook for those who desire to obtain a brief general review of Latin-American progress. The book contains a bibliography and a map.

*LATIN AMERICA, Clark University Addresses, November, 1913. Edited by George H. Blakeslee, Professor of History, Clark University. Published by G. E. Stechert & Company, New York. Price \$2.50 net.

*LATIN AMERICA, by William R. Shepherd, Professor of History in Columbia University. Published by Henry Holt & Co., New York. Price 50c. net.

The WORLD'S MARKET PLACE



FOR thousands of years mankind has been going to the markets where buyers and sellers could meet and exchange commodities on terms of mutual confidence and good will. Starting with little local fairs at which the housewives of a few adjoining towns and villages secured the necessities of the coming week, and a few itinerant merchants offered various small wares to those who cared to buy, these markets expanded until certain large cities became trading centers for a vast variety of merchandise and the meeting place for men from many far-off lands. The twentieth century, with its many epoch-making inventions, destroyed to a large extent these markets to which buyers came in person and substituted a system of exchange whereby the produce of many manufacturers reached the retail distributor in his own home town—after being introduced by salesmen, advertisements and in other ways—thus enabling him to purchase the requirements of his trade without crossing his doorstep. So perfect had the world's systems of communication and transportation become that the merchant knew that, once his order was placed, the goods would in due course be delivered safely at his door.

To-day the great war has, for the time being, shattered the vast fabric of international trade relations thus laboriously built up by past generations. Buyers can no longer communicate with many concerns that formerly furnished certain of their requirements, while others are no longer in position to ship—or even to manufacture—the lines they were wont to supply.

In this situation DUN'S INTERNATIONAL REVIEW believes that it can perform a most useful work in aiding such buyers to get in communication with other firms who may be able to supply some of their needs. Several pages of this issue, therefore, have been devoted to condensed summaries of *all* the products of a considerable number of representative firms. Similar lists will appear in subsequent issues, and if these pages are laid aside and kept they will form, it is hoped, a most convenient guide for buyers who are in doubt as to where they can now obtain certain specialties or lines that formerly were imported from countries whose export trade has been affected by the war. In most cases the lines mentioned are completely described and illustrated in special catalogues issued by the firms mentioned, and the best plan for obtaining full information regarding them is to write at once to each firm requesting catalogues on the line desired, together with price lists and export terms.

Ice-Making and Refrigerating

THE Baker Ice Machine Company, Omaha, Nebraska, U. S. A., build plants for the manufacture of ice either with or without the distillation of water. These plants are especially designed for the export trade, being strongly and simply built. Every part is interchangeable. This company make ice plants in all sizes up to 25 tons daily capacity, and refrigerating plants up to 50 tons. They manufacture the machinery contained therein, and control several patents that make their product particularly desirable and add to its economy of operation. Bulletin No. 17, which will be sent free on request, will be found most valuable.

Small Gasoline Engines

GASOLINE engines, feed mills, pump jacks and portable trucks are manufactured by Nelson Bros. Company, Saginaw, Michigan, U. S. A. Their "Jumbo" gasoline engines are from 1½ to 4½ horsepower. They are designed for close regulation of speed; they are economical, durable and inexpensive; they are so simple in construction that an inexperienced person can run them. Their usefulness for every purpose where power can be employed is beyond question. This company has a special proposition for agents that is particularly liberal and attractive.

Overhead Tramways and Flexible Conveyors

AERIAL cable tramways are among the most economical methods of carrying freight and passengers between near or distant places where surface lines are too expensive to construct or are otherwise impracticable. The Ambursen Company

(Tramway Department), 61 Broadway, New York City, make and install the Lawson automatic tramway whose cars, by an ingenious device, in dumping clear themselves of every material however soft or sticky. Those having haulage problems and who will send for this company's bulletins and state their problems after reading them, will receive information as to the proper layout and the cost of installation and operation. This company also make flexible conveyors, cable traction locomotives, etc.

Refrigerators for the Tropics

REFRIGERATORS are the sole product of the White Frost Refrigerator Company, Department 17, Jackson, Michigan, U. S. A., who have been selling their product all over the world for the last ten years. These refrigerators are especially adapted to equatorial countries where only artificial ice is available and economy and sanitation are absolutely essential. No wood is used in the construction of these refrigerators, the materials being indestructible and impervious to insects.

Electric Cloth-Cutting Machines

THE characteristics of the Maimin electric cloth-cutting machines, made by H. Maimin Co., Inc., 64 University Place, New York City, U. S. A., are: the specially patented grinder inside of the safety guard and directly under the motor; the powerful bi-polar magnetic motor, small in size, non-sparking and enclosed so that it is dustproof; the gear and knife-lock combination which eliminates useless mechanisms, and the handle bracket which does not become loosened. These machines are subject to a ten-year guarantee. They come in different sizes, in the Maimin and Ballard Models. In New

York City alone these machines are used by several hundred of the largest manufacturers of men's and women's clothing, and are being rapidly introduced abroad.

Boats, Marine Machinery, Pumps and Dredges

THOSE interested in machinery for boats, for pumping or dredging, should address the Marine Iron Works, Department F, Chicago, Illinois, U. S. A. They make marine engines of from 10 to 1,000 horsepower, both single and double cylinder, fore and aft compound type, and triple expansion; also steam engines for stern paddlewheel and sidewheel boats in high pressure, horizontal tandem compound and cross compound patterns. Their steam boilers are of the following types: Scotch marine, Clyde or dry-back Scotch, externally fired or "Westriver" (such as used on stern paddlewheel boats), and tube boilers.

They also make boats for shipment in the "knock-down" shape of steel construction, for propeller, stern and side paddlewheel propulsion; centrifugal pumps for dredging, pumping and irrigating purposes; machinery for hydraulic suction dredges, consisting of the hoists, cutters, cutter engines, steel ladders for supporting the cutter, and kindred machinery that is used or employed with hydraulic dredges; also complete dredges, hulls for shipment in the "knock-down" shape, from 10-inch size of pump up to and including 18 inches diameter.

Water Supply Machinery

AN efficient and up-to-date water supply is a prime necessity of every community. The Challenge Company, 98 River Street, Batavia, Ill., U. S. A., claim that their windmills and gasoline engines used in connection with Challenge pumps, cylinders, tanks and towers will meet any possible demand in any country. In addition to a complete line of waterworks machinery and supplies, this concern manufacture silos, grinders, wood saws and lawn swings. Catalogues illustrating any of the Challenge products will be sent on request.

Kerosene and Gasoline Lighting Systems

FOR the illumination of stores, residences, halls, opera houses, churches, streets, boulevards, parks, wharves, railway stations, etc., the Nagel-Chase Manufacturing Company, 157-169 E. Erie Street, Chicago, Ill., U. S. A., offer both kerosene and gasoline lighting systems which, they state, can be operated with almost the same convenience and safety as electricity or city gas. This line should prove especially attractive to places where a city gas or electricity supply is unavailable. A catalogue, published in both English and Spanish, will be sent on request.

American Cotton Goods

THE G. A. Stafford & Company, 39 Worth Street, New York, N. Y., U. S. A., are the general selling agents for a number of the largest cotton manufacturers in the United States. The output of these manufacturers consists largely of unbleached sheetings and drills, colored chambrays, gingham, suitings, denims, khakis, etc. Three of their best sellers, which are made especially for export are "Dril Cabeza de Perro," No. 300; "Drilox," No. 200, and "Jaganagh Madras." This concern desires to establish connections with a few of the leading importers of each country.

A Handy Home Creamery

HAND and power churns in eight sizes ranging in capacity from six to sixty gallons are the specialty of the Minnetonka Company, 507 Farmers' Bank Building, Owatonna, Minn.,

U. S. A. These machines enable the farmer to make the best grade of butter right on his farm and to do it more economically and on a larger scale than with the old-fashioned churn. Complete catalogues in both English and Spanish illustrating the features of this home creamery will be sent on request.

Lighting and Heating Apparatus

LIGHTING plants for residences, commercial houses, industrial concerns and municipalities; lamps, lanterns and fixtures of all kinds—everything, in fact, to dispel darkness—comprise the product of the American Gas Machine Company, 86 Warren Street, New York City, U. S. A. Their individual electric light plants are inexpensive and technical knowledge or electrical experience is not necessary to operate them. In their gas lighting apparatus the fuel for the illuminant is transmitted through hollow wires and vaporized when it is consumed—the latest scientific and most economical method. Gas stoves, water heaters, flatirons, etc., are among their other products. Correspondence in any language will receive prompt attention.

Woodworking Machinery

THE line of woodworking machinery made by the Crescent Machine Company, 9 Columbia Street, Leetonia, Ohio, U. S. A., comprises a great variety of band saws, saw tables, shapers, jointers, machine knives, woodworkers, planers, matchers, surfacers, cut-off saws, disc grinders, borers, and all the special appliances that go with them. Their entire line is shown in their catalogue No. 51, which is handsomely illustrated, comprehensive, gives all the information needed by the careful buyer, and is of convenient pocket size. It is very interesting.

Power Transmitting Machinery

THE Bond Foundry & Machine Company, Manheim, Lancaster County, Pa., U. S. A., manufacture a complete line of dependable power transmission appliances—iron pulleys, bearings, boxes, collars, couplings, hangers, blocks, stands, etc., in a wide range of sizes. Their leaflets are in Spanish, Portuguese and English, but correspondence in any language will receive prompt and careful attention.

Gasoline Engines, Tractors and Cream Separators

SMALL portable gasoline engines, particularly for farm use, from 1½ to 12 horsepower, both inclusive; cream separators, milking machines and farm tractors are the principal features of the product of the Waterloo Gasoline Engine Company, 207 West Third Avenue, Waterloo, Iowa, U. S. A., whose "Waterloo Boy" machines and trademark are widely known both in the domestic and export field. Their other products are feed mills and manure spreaders. This company offer special terms to representatives abroad where they have not already established agencies.

Lawn Mowers and Gasoline Engines

LAWN mowers and marine and stationary gasoline engines are the specialties of the Clipper Lawn Mower Co., Dixon, Illinois, U. S. A. The feature of the Clipper lawn mower is that it does not touch the grass until it cuts it, being constructed on the same principle as the large horsedrawn mowing machines. The length of the cutter bar varies, according to the size of the machines, from 12 to 24 inches.

The Clipper gasoline engines are built for hard work. In the single cylinder they are 2 and 3-horsepower, and in the double, 5 and 8-horsepower.

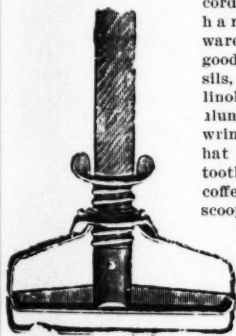
Information for Buyers

As it is frequently impossible for advertisers to explain clearly the purpose or particular merits of their products in the advertising columns, space in this section is placed at their disposal to enable them to do so. It is proper to add that they, and not the publishers, are authority for the statements made.



Woodenware and Housefurnishings

THE attention of Importers, general distributors and dealers is invited by C. H. & E. S. Goldberg, 114 Reade Street, New York City, U. S. A., to their extensive line of woodenware and household goods, and they state that they are in a position to supply these goods for general importers at prices that are very low. The catalogue of this concern lists many hundreds of articles in the woodenware and housefurnishing line, including brooms, brushes, scales,



A strong handle for the mop or brush

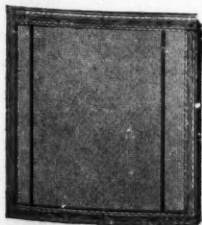
cordage, refrigerators, hammocks, hardware specialties, paper goods, kitchen utensils, grocers' supplies, linoleum, oil stoves, aluminum specialties, wringers, fly paper, hat and coat hangers, toothpicks, lanterns, coffee grinders, grain scoops and many other specialties.

Included in their line of general woodenware is a large assortment of wooden pails ranging in size and design from small



An enamelware dipper—one of a very extensive line

plastic pails with two hoops to large oak sewer or stable pails, iron strapped, with double bottoms; wooden tubs in sufficient variety to satisfy every requirement; washboards made with single or double zinc, brass or glass corrugations; a great variety of wooden utensils for the kitchen and a large assortment of brooms and brushes.



Adjustable screen with frame of selected wood

Among the many housefurnishings exported by this concern are found hammocks; baskets of every description from those made of staves for carrying potatoes or oysters to fancy fruit or shopping baskets; and a large assortment of wire cooking utensils. In addition to the articles mentioned above

logue shows many different types of lanterns, lamps and stoves, harness and stable equipment and many stationery supplies.



An excellent veneer for furniture

The "Competitor Screen," shown in the accompanying illustration, is made of hardwood, fine grained and handsomely finished, and has a concealed slide which permits adjustment to different window sizes.

This concern also make a liquid veneer which is used for dusting woodwork, pianos, furniture, carriages, automobiles, etc. The manufacturers say that this veneer is not a varnish, but a "surface food" and is especially adapted for dusting.

Inasmuch as this concern takes the entire output of many factories and buys in carload lots only, they state that they command the lowest prices, and are fully equipped to execute the largest orders promptly, being one of the largest exporters of woodenware and household goods in America. A large illustrated catalogue which gives a full description of their entire line will be sent on request.

Modern Lighting Systems for all Purposes

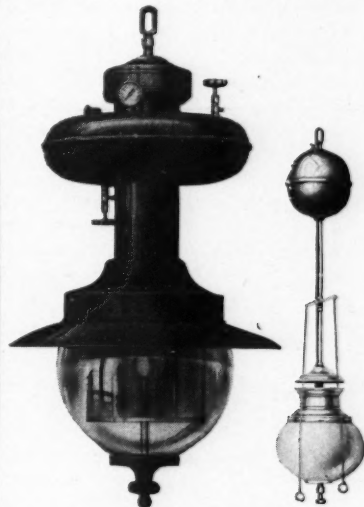
FEW features of modern life have shown greater advances within the past few years than the various methods of artificial lighting. In the large centers of population where there are central gas and electric plants, people seem to take as a matter of course, the conveniences of this nature that are at their disposal. It usually requires a visit to some locality where these advantages are not present for their value to be properly appreciated. Those who have never experienced the comforts of a modern system of lighting, and have considered the old-fashioned kerosene lamp about the only available means of lighting their homes or other places, will doubtless be surprised to learn at how little cost they can now illuminate their residences, stores, halls, churches, etc., as brilliantly as any in the cities and towns.

There are now at the disposal of people living even in isolated places methods of providing artificial light, that are as convenient, safe and efficient as electricity or city gas. Among the most popular of these is what is known as the hollow wire system, which uses kerosene or gasoline for fuel. The hollow wire system consists of a tank, that may be located in the cellar or any other convenient place, and a hollow brass wire about one-eighth of an inch in diameter, with branches leading from the tank to the lamps. The fuel is forced by air pressure to the lamps, which are of the well-known "mantle" type, and are capable of generating a light ranging from 300 to 1,000-candlepower, according to size and style. Each lamp is equipped

with its own generator and an automatic cleaning device and will last for years without any attention beyond occasional renewals of glassware and mantles. The light given is much more brilliant than that of ordinary electric or city gas lamps and the cost of operating the small 300-candlepower size is not much more than 1-10 of a cent per hour.

There are also available, for those who prefer them or for places where they may be more desirable, individual lamps in a great variety of design and range of candlepower, either for indoor or outdoor service. They are all extremely simple to install. The wire is very flexible and all connections are supplied, so that practically anyone can do the work.

A remarkable amount of information regarding these modern lighting systems is contained in a catalogue that has been pre-

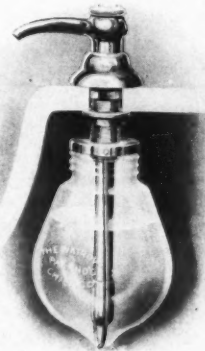


An individual inverted side arc lamp of 1,000 candlepower and a 300 candlepower individual lamp

pared by The Nagel-Chase Manufacturing Company, 157-169 East Erie Street, Chicago, Ill., U. S. A., who will be pleased to mail a copy without charge to any interested person upon receipt of his name and address.

Increasing Popularity of Liquid Soap

THE possible sanitary disadvantages arising from many persons in factories and offices using the same cake of soap have long been recognized. This drawback seems to be eliminated by a device that appears to fill every requirement of hygiene, convenience



This Style "V" container is designed for attachment as shown

and economy. It represents a radical departure from the old-fashioned system. The solid bar or cake of soap is replaced by a

liquid kept in a container from which each individual draws whatever is necessary. The result is practically the same as if every person were provided with a separate cake of soap for his particular use.

The liquid soap is kept in a closed glass bowl supported by a bracket which is easily fastened to the wall. The amount of soap required is drawn by pressure on a plunger. There is no waste and no possibility of the supply being contaminated by dirt, or other foreign matter. Liquid soap is free from all grease or coloring and is readily soluble in hard or soft water. The fixtures are made in a variety of styles, according to the purpose for which they are to be used, and while the new system is becoming very popular in the home it is also meeting with especial favor in high class hotels, and in offices, factories and public or semi-public institutions. The Watrous Company, (not inc.), 101-2 The



The Style "M" liquid soap fixture fastens directly to the wall

New Lytton Building, Chicago, Ill., U. S. A., manufacturers of the Watrous Liquid Soap Fixtures and Watrous Liquid Soap, push-buttons, self-closing faucets, etc., will send a copy of their booklet to any interested party upon receipt of name and address.

Metal Toys and Novelties

MERCHANTS in a position to handle a quick selling and profitable line of merchandise will be interested in the catalogue of The Kenton Hardware Co., Kenton, Ohio, U. S. A., which describes their extensive assortment of metal toys and novelties. Included therein will be found toy banks, toy cooking ranges, toy fire departments, toy cap pistols, toy automobiles, blank cartridge pistols, "pap-er-krak-toys," "boy scout" outfits, toy sadirons, etc. These toys are recommended by the manufacturers for their durability, excellence of workmanship and finish and the faithfulness with which they follow the designs of the articles made for adult use.

The toy banks made by this concern are being sold in large quantities in almost every part of the world, as they are very popular with people who like to teach their children habits of economy. They are made in vari-

ous designs of steel, beautifully decorated with nickel-plating, some being fitted with combination locks, others with key locks, while still others open automatically when a certain amount has been deposited. Another article that is a very rapid seller, especially during occasions of national celebration is what is known as the "Pap-er-krak." This device consists of a rubber ball in two parts, each of which is fastened in what might be described as the jaws of a pair of pincers. The upper part of this ball has a small hole in the top. A piece of ordinary newspaper is placed between the two halves



A toy mule and coal cart and driver. It dumps its load like a real cart

of the ball and they are then pressed tightly together by the handle of the pincers. A sharp blow of the hand or any object causes a sudden compression of the air in the whole half of the rubber ball and the paper is broken with a loud report. These toys are made in a number of styles and as the ammunition costs nothing and there is no fire, no smoke and no danger, they are very popular with the children.

Children are delighted with the toy fire engines made by this concern. The brilliant decorations and the sense of motion derived



This safety vault bank has a combination lock and comes in 3 sizes

from the galloping horses as the toy is drawn over the floor makes it very popular. Another favorite with boys is a locomotive with a train of cars, such as shown in the accompanying illustration. For the little girls there are miniature cooking ranges, in great variety. Among them are stoves capable of actual use. As they are more than mere toys, a good deal of culinary knowledge can be acquired in the course of play. They burn small size coal or wood and are made up to 26½ inches in length, 20 inches in height and 12½ inches in width. Merchants interested in this class of merchandise should write for a copy of this catalogue, which will be sent to any address upon application.

This toy passenger train consists of a locomotive, tender and two coaches—the last one being an "observation car"

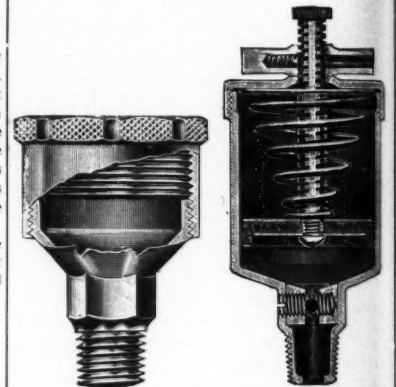


Please mention DUN'S REVIEW when writing to Advertisers, and give ADDRESS IN FULL, including Province and Country.

Oil Cups and Grease Cups for all Purposes

THERE is no more important function in the operation of any kind of machinery than its proper lubrication. Many methods and devices have been introduced for doing this work efficiently and reliably, prominent among which are what are known as oil or grease cups. These cups are made in a vast variety of designs and sizes to meet the various requirements of different classes of machinery, and they constitute the best means that has yet been devised for continuous lubrication of parts that are in constant motion. Under certain conditions, such as heavy bearings of rapidly revolving shafts the usual lubricant is some form of grease, and this is best applied by some variety of grease cup. These cups are attached by a screw thread to a hole in the bearing through which the grease is forced against the shaft. In some of the cups the pressure on the grease is provided by a spring, and in others by an occasional turn of the cup.

When a very heavy grease becomes stiff from cold, the cup is subjected to consider-



Style "A" oil cup

"Empress" spring compression grease cup

able strain in forcing its contents against the part to be lubricated. For this reason it is imperative that the material entering into the construction of these cups should be the strongest obtainable, because should a cup be broken it might be necessary to stop the machinery until another could be obtained. It is therefore important for the owner or engineer to obtain goods of the highest quality, as those of inferior grade are a source of constant trouble and expense.

Factory owners and others connected with machinery will therefore be interested in the line of oil cups and grease cups manufactured by the Bowen Manufacturing Company, of Auburn, N. Y., U. S. A. Their products, they claim, are drawn from sheet metal, and are superior in many respects to those made from castings, being not only neater and lighter, but stronger and more rigid. The metal is dense and uniform and breakage and leakage due to spongy metal and sand holes is unknown. The entire output of this firm is described in a large illustrated catalogue, copies of which can be obtained upon application to the company direct.

Oil and grease cups are staple goods with the hardware merchant. The demand for them is steady, but the best and newest devices are most called for. To hold his trade the dealer not only must meet this demand but keep ahead of it.

The Five-Cent Fare Bus

THE "jitney bus"—an automobile used for carrying passengers at a 5-cent fare—originated in Los Angeles, California, only a few months ago. An official of a street railway company in that city is reported to have told a legislative committee recently that he believed it would be only a short time before the auto bus would almost drive the tramway companies out of business. The mayor of Seattle—another large city on the Pacific Coast of the United States—is said to oppose a movement for the municipalization of the tramway lines on the ground that they would soon be superseded by the auto bus.

While it is hardly likely that the motor bus will entirely displace the tramway, it will undoubtedly do much toward solving

problems involve considerable work and expense. The improved plates in question—made by the Beaton & Corbin Mfg. Co., Southington, Connecticut, U. S. A., are hinged. They can be put on after the work is finished, and can be secured permanently in position at any time. They have been widely used for many years. They are said to be the most practical plates made, and it is asserted that no arguments are necessary to convince any steamfitter of their utility and practicability.

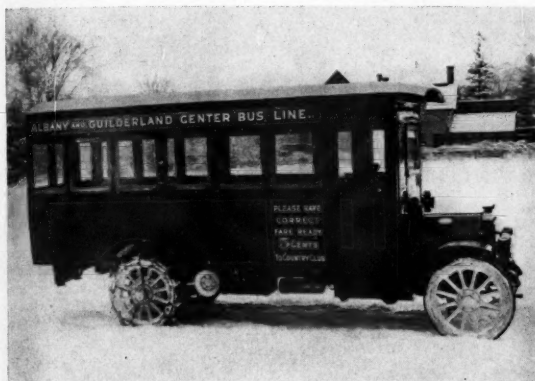
These plates are made separately for ceilings or for floors, and in combination, one pattern being adapted for both purposes. The No. 3 combination plate is hinged. It is fastened by a snaplock catch which is secured by a set screw. The sizes run from $\frac{1}{4}$ to 10 inches. The No. 7 is a combination spring plate. The halves are riveted together making a one-piece plate. Springs

are adjustable to any depth between floor and ceiling.

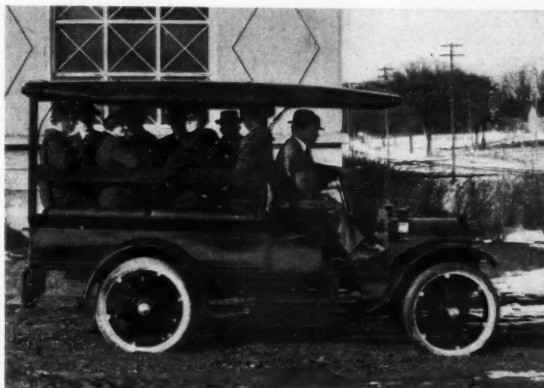
Descriptive matter, prices and other information may be had by addressing the company as above indicated.

Types of "Jitney Bus" Chassis

THE recent discovery that many kinds of automobiles could be utilized profitably for the carrying of passengers at 5 cents each has given a great impetus to the American motor car industry. The "jitney bus," as it is called, is still such a new institution, and the expansion of its use has been so unprecedentedly rapid, that no one kind of chassis is much in the majority. There are certain types, however, that are returning larger net profits than others, owing to their



This Federal motor bus, in use in New York State, is one of the favorite types of five-cent fare vehicles



A Dart Model "A" chassis. This style has been widely purchased by individuals and bus lines in the United States

certain parts of the transportation problem of any city. The 5-cent fare bus idea has already spread from the United States to Canada, and seems likely to find as much favor in other countries where it may be introduced. This new aspect of motor car passenger transportation is therefore one that is worthy of careful investigation by motor car users or distributors no matter in what part of the world they may be located.

The Federal Motor Truck Company, Detroit, Michigan, U. S. A., make several types of chassis that are particularly suitable for this use. They have large carrying capacity combined with adequate speed and great economy of operation. One of them is shown in the illustration that accompanies this article. The Federal Company will be glad to furnish full information regarding this and their other styles of vehicles to anyone writing them at the above address.

Improved Floor and Ceiling Plates

A STRIKING example of how inventive ingenuity, combined with long practical experience, can solve—simply but effectively—a problem that has annoyed steamfitters everywhere is seen in a type of floor and ceiling plates of American manufacture. Ordinarily such plates are cast in one solid piece and have to be put in place when the pipes are installed. Repairs and replace-

take up the contraction and allow for the expansion of the pipe. This plate can be opened by pushing downward with the thumb and then snapped around the pipe. The sizes are from $\frac{3}{8}$ to 3 inches.

The Wells snaplock, cold-rolled steel combination plates are of the newest patterns. The lightness makes them particularly valuable for ceiling use. There is also a double combination floor and ceiling plate, intended for twin connections where single plates cannot be used, and the No. 8 plumbers' plate



Cold rolled steel combination floor and ceiling plate

which is specially intended for the highest class of work.

All these plates are made in black and nickel plated; also in polished and nickel plated brass. This company also makes solid plates and "adjusto" sleeves. The latter

being better adapted for bus service because more economical of operation.

One of these is shown in the accompanying illustration. It is a Model "A" chassis, made by the Dart Motor Truck Co., Waterloo, Iowa, U. S. A., and is priced to the consumer at \$1,000 f.o.b., the place of its manufacture. Since the "jitney bus" became popular, a few months ago, this chassis has been sold in large numbers to individuals and bus lines all over the United States. That it has been satisfactory is proved by the flood of orders from early buyers for additional cars.

Another type made by the Dart Co. is the Model "C" chassis which is listed at \$1,900 with dual wheels. The body is \$750 extra. It makes a first class bus in every respect. It is of the prepayment type, the passengers entering at the front and leaving at the rear door. The rear door is operated by a lever at the right of the driver in front. The machine is equipped with dome lights, electric bells, French plate glass, leather upholstery, and is furnished throughout with the very best material obtainable.

This motor carriage of passengers at a low rate of fare is likely to spread to other countries. Those who are the "jitney bus" pioneers in any locality will have a considerable advantage over their subsequent competitors. Persons interested in this most modern phase of automobile traffic will do well to write to the Dart Motor Truck Co. at the above address.

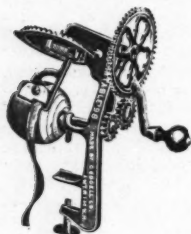
Types of the Wells snaplock cold rolled steel hinged floor and ceiling plates that can be adjusted after pipes are in place



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Specialties for the Household and Factory

ANY merchant who is not already thoroughly acquainted with the labor-saving devices for household use made by the Goodell Company, 109 Main Street, Antrim, New Hampshire, U. S. A., will find it profitable to examine their catalogue. A trial order will convince



"Turn table" apple parer

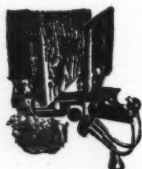
as it has many others all around the world—that a steady and profitable business can be done in these hardware specialties. The "Turntable Apple Parer," an illustration of which is shown herewith, pares the whole apple, including the end. The frame is in one piece, and the gears are above the paring so that the juice does not touch them. When the apple is pared, it is automatically pushed off the holder. The device is so simple that a child can use it.

Still another little machine, the "White Mountain" apple parer, corer and slicer, also can be used to pare without coring and slicing. The family cherry stoner stones two cherries at each stroke. The pit comes out and the juice stays in, leaving the fruit plump and round as before stoning. With the Saratoga potato chipper, potatoes of any size and shape are thoroughly trimmed and pared, all eyes and hollow places cleaned out, and the po-

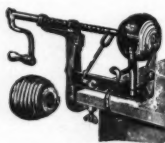


"Saratoga" potato sliced to an even thinness. tato chipper

In the hand machines the Goodell Company makes six different styles of apple parers, corers and slicers, and two kinds of potato parers. They also manufacture three types of apple parers and corers that are driven by power, and are especially adapted for use in evaporating establishments, canneries, bakeries, hotels and restaurants. Then there



Family cherry stoner



"White Mountain" apple parer

is a power driven rapid fruit slicer which has a capacity of 1,000 bushels a day. Another slicer, that is run by hand, will slice a bushel of apples in two minutes.

Still another machine is a parer that is widely used by extract manufacturers and



Of thimbles, chatelaine pins (many with safety catches), cuff, blouse or waist pins, and brooches—the product of the manufacturing jeweler's highest art and skill—and watches of every style and quality, there is an extensive assortment

others who pare quantities of oranges and lemons. Among the other products of this company are a hand machine for cutting string beans, rhubarb, celery, macaroni, etc., a vegetable slicer which cuts to any thickness desired; vegetable mashers, bread crumbers,

strainer holders, can openers, lawn edgers, corn and bush hooks, weed diggers and asparagus knives and a broadcast seed sower which is operated by hand and sows all grains or grass seed.

A catalogue of these interesting devices will be sent by the manufacturer on request.

Jewelry at Wholesale

THE new annual wholesale jewelry catalogue "D" of the firm of Wallenstein, Mayer & Co., 33-37 East Fourth Street, Cincinnati, Ohio, U. S. A., is most comprehensive. It is a handsome, cloth-bound volume of more



Cuff buttons may be had in rolled gold plate, gold filled, solid gold, sterling silver and pearl, and in many patterns and finishes. In the ear screws and earrings, of which there are hundreds of patterns, only solid gold wires are used

than 900 pages. The illustrations and text describe thousands of articles, such as jewelry, watches, clocks, diamonds, silver and gold goods, hollowware, plated goods, emblems, pens, optical goods, ivory and leather goods, umbrellas, canes, pipes, novelties, etc. The catalogue, which is in English and Spanish, is a storehouse of information that is of great value to any merchant handling any of the lines of goods that it covers. Wallenstein, Mayer & Co. will gladly mail it free of charge and of all carriage costs to any legitimate dealer or merchant in any part of the world. This firm are large wholesale dealers in the products of many American manufacturers. The goods that they sell

comprises a large number of varieties in gold, signet and colored stones, as well as genuine diamonds and genuine pearls. These rings are furnished in a variety of finishes and can be had in any size desired.

There are hundreds of styles and patterns of pins. Many of them are made with safety catches, thus insuring them against loss. Ladies' brooches come in solid gold, rolled gold plate and gold filled, set with genuine diamonds or other precious stones, or with gems of less value. As in everything else, the designs, finishes and workmanship are of the very best.

Among the many other classes of articles dealt in by this firm may be mentioned elec-



Rings are solid gold, gold filled or of sterling silver, and there is a great variety to choose from, in plain, signet and colored stones, as well as genuine diamonds and pearls, and in any finish or any size

are fully guaranteed both by the makers and by these wholesale distributors. The latter state that any article that does not give entire satisfaction will be exchanged for a new piece.

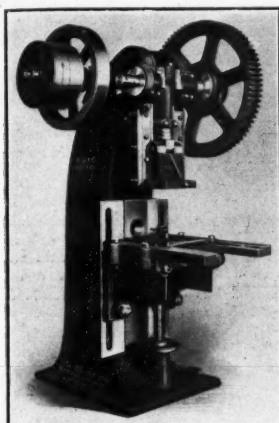
Their line of watches is very complete. It comprises every style and quality of well-known American makes, both in cases and movements, ranging from the very cheapest to the very finest made. The filled cases are all hand-engraved and are guaranteed to wear a certain number of years. Some idea of the variety of styles and grades in cases and movements alone may be gathered when it is said that in solid gold watch cases 106 different patterns are pictured in this catalogue, and in gold filled cases about 600 kinds.

tric flashlights, showcases and fixtures, carrying sets, razors, mesh bags and vanities, toilet and table ware of all kinds, etc. In fact, from the stock that is carried on hand,

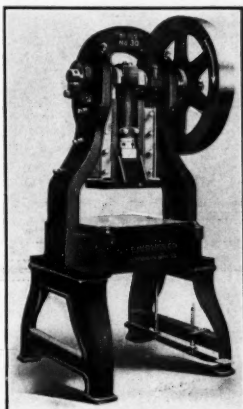


a merchant can supply himself with everything that he needs. This is particularly advantageous for dealers in distant countries, for it obviates the necessity of assembling and packing many different shipments at the point of export.

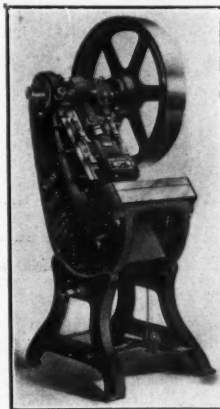
In the jewel department diamonds, rubies, pearls and other precious stones may be had loose or mounted. Cuff buttons are furnished in rolled gold plate, gold filled, solid gold, sterling silver and pearl. The assortment of patterns and finishes is very extensive. These



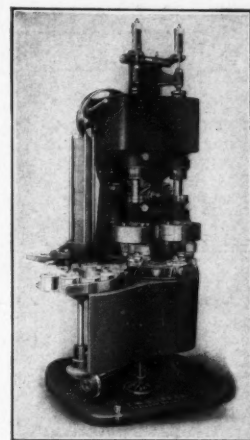
A Bliss horning and wiring press, especially intended for grooving bodies of coffee and tea pots, pails, cans, etc.; also for perforating seamless drawn colanders, ladles, strain-ers and lamp parts



In factories where space forbids using a number of presses this arch power press is particularly valuable for such work as stamping petroleum can sides, shovels, etc.



This inclinable power press, built in many sizes, may be used up-right or set on an incline to allow the finished article to fall off by gravity

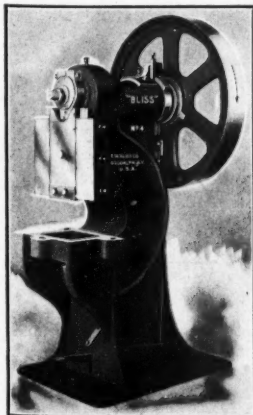


One of many types of Bliss double seaming machines. This is for double seaming ends of round tin cans, principally those used for fruits, vegetables and fish. Filled cans can be seamed

What "Bliss" Machinery is Used For

THOUSANDS of "Bliss" machines are in daily use in the workshops, mills and factories all around the world. The great variety of these machines and the extraordinary extent of the many fields of industry in which they are employed are not generally understood. They are the outcome of many years' experience in this one branch of metal working. As fast as new requirements in this line have arisen they have been met by the devising of new apparatus or additions and improvements to those already in existence. The latest catalogue of the E. W. Bliss Company is a handsomely bound and illustrated volume of 840 pages, yet even a book of this size does not suffice to show more than a few of the many machines regularly built by this huge enterprise. Illustrations of a limited number of special machines, also of special feeds or other attachments to standard machines, are included as suggestive of some of the uses to which these products

This "Stiles" power punching press is built in many sizes. As the entire pressure is through solid metal it is specially adapted for heavy stamping in making hardware, bicycles, locks, guns, cutlery, etc.



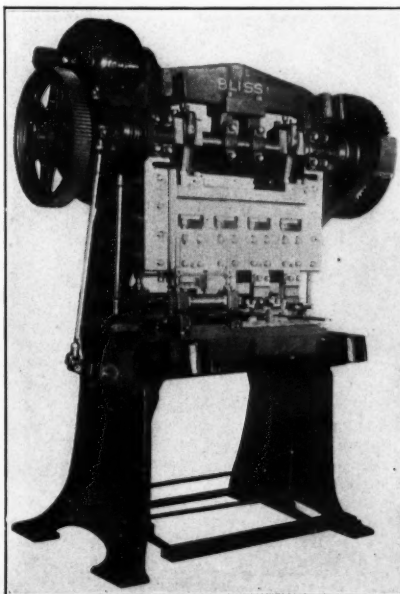
may be adapted. The manufacturers state that they also have more than 5,000 negatives, illustrating special and standard machines, arranged with special feeds and fixtures as used for specific operations.

The main works of the E. W. Bliss Company are at 24 John Street, Brooklyn, N. Y., U. S. A. They also have offices and extensive factories in London and Paris.

What Bliss machinery is used for is interesting. In the first place, the company build presses, dies and machinery for the rapid and economical production of tin and sheet ironware in all varieties, including ware that is pieced, stamped or pressed. They also build punching, shearing, forming and forging machinery used by rolling mills, locomotive and car builders, automobile manufacturers, drop forging works, etc.

The machines and dies made by this company include apparatus adapted to the manu-

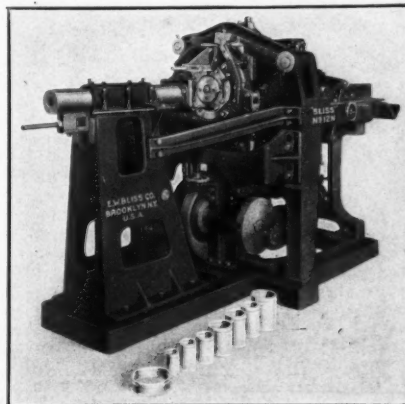
A type of the Bliss automatic combination feed press. The blanks, fed from a circular disk, are carried from die to die until the finished product is discharged. Used for sheet metal goods requiring a series of operations



facture of the following products: Agricultural implements, albums, aluminum goods, armature discs and segments automobile parts, bicycle parts, bird cages, bottle caps and capsules, brass goods, Britannia ware, buckles, burners, cans of every description, cash registers, cigarette boxes, clocks, coal hods, collapsible tubes, cooking utensils, cornice work, cuspidors, cutlery, dental instruments, door knobs, dripping pans, drop forgings, electrical goods, elevator buckets, enamel ware, forks, furniture (metal), gas fixtures, gongs, gun parts, hammers, hardware, harness trimmings, hinges, horseshoes, jewelry, kitchen utensils, lamps, lanterns, locks, match boxes, metallic ceilings, metal lath, musical instruments, oil stoves, paint tubes, paper plaques, perforated metal, pick-eyes, pieced tinware, plated ware, playing cards, pocketbook trimmings, powder kegs, range boilers, reflectors, roofing, rubber cups, satchel frames, shingles (metal), shovels, silverware, sinks, speaking tubes, spoons, stove trimmings, thimbles, tobacco boxes, toys, trunk trimmings, typewriters, vapor stoves, washtubs, watches, wrought iron ranges, zinc work, and many other staple and special lines of goods.

Inquiries should always give full particulars as to the class and size of the work to be done, and should be addressed to the Brooklyn works.

One of the many types of body makers. This machine is fitted with notching, forming, beading and flanging attachments. Operations are entirely automatic. Used for packing powders, teas, coffee and other dry stuffs



A New Coffee Mill for Family Use

AMONG the many improved devices for household use now on the market are some that are of such distinctive character and unusual merit that they quickly make a place for themselves among the conveniences that are necessities. Perhaps one of the best examples of how quickly an article possessing real value will acquire popularity is an improved coffee mill which was placed



In this grinder the coffee is protected from the air and kept fresh

on the market by an American manufacturer a few years ago. The mill can be attached to the wall in the kitchen. This not only renders it much more convenient to operate, but also does away with the liability of scraping the skin off the knuckles, which frequently happened with the old style contrivances that were held in the lap when in use.

On the top of the grinder proper is a glass container, holding about one pound. This is provided with a screwed-on metallic cap which protects the coffee from the air and keeps the contents of the re-

interchangeable and repairs can be obtained at a slight expense. A dial screw with a scale marked on the hub of the handle regulates the fineness. The mills are finished in three attractive shades of black, white and blue. The very moderate cost of these improved coffee grinders has been an important factor in the extension of their use.

Merchants or others desiring further particulars should address The Enterprise Manufacturing Company of Pa., Philadelphia, Pa., U. S. A., and request a catalogue and price list of their improved "Enterprise" Coffee Mill and other household specialties of which they manufacture a most extensive and attractive line.

A New Marine Motor

ACCESIBILITY is one of the most striking features of a new marine motor, known as "Type QM," made by the Wisconsin Mfg. Co. It has four cylinders, 3¼-inch bore and 5-inch stroke. Valves, pistons and cylinder head can easily be cleaned by removing the cylinder head casting. Connecting rod bearings can be examined and adjusted through large handhole plates. The cam shaft may be easily removed from the motor in a few minutes by taking off the gear case cover.

No intake manifold is required as the carburetor is bolted directly against the side of the cylinder, a cored passage leading the gases across the cylinders. This passage is heated by the water circulating around it, thus facilitating carburetion. The exhaust manifold is on the opposite side of the motor from the intake and does not interfere with any of the other parts. It is bolted to the cylinder and water-jacketed, thus insuring perfect cooling.

The breathers on this motor are located in the valve stem cover plate and the breathing action of the motor operates through the valve stem chamber which insures lubrication of the valve stems by the vapor of the crank case.

The valve stem guides are removable so that they can be replaced in case of wear, a very economical construction from a standpoint of repairs. The valve taper guides are separate castings and can be easily removed, being held in place by means of a forked crab forging. By loosening this crab the complete taper assembly, including guide, can be taken out without disturbing other parts. A removable metal plate covers

and this is one of the reasons why Wisconsin Motors run so smoothly. The crank shaft is balanced on a Norton Running Balance Machine; the fly wheel is also carefully balanced and the connecting rods and pistons are weighed and matched. The four cylinders and upper part of the crank case are cast in bloc. The crank shaft, 2 inches in diameter, has a tensile strength of 125,000 pounds per square inch. It is of the two-bearing type, the rear bearings 3½ inches long, the front bearings 3¼ inches long. The enclosed valves, which are 1 1/16 inches in diameter, are mechanically operated on one side of the motor by a single cam shaft. Both intake and exhaust valves are interchangeable and have nickel steel heads electrically welded to carbon steel stems. The liberal crank and connecting rod bearings are made of the highest grade Fahrigr bearing metal with bronze backs. The connecting rod and crank shaft bearings are held in place by brass retaining screws and liners which also provide means of a double gear pump accessibly located on the end of the motor and driven by the cam shaft. This pump takes the oil from the pump through a strainer and forces it through a duct to troughs under the connecting rods. The oil is picked up by the rods and enters the connecting rod bearings through openings in the lower caps. The rods also throw the oil into a pocket over the main bearings and cam shaft. The spray formed lubricates the cylinders. The crank shaft gear is provided with a recess in the rear face into which oil is fed from the front main bearing. From this recess the oil is directed by centrifugal force through drilled holes directly into the gear teeth.

The clutch is of the multiple disc type and grips slowly, but firmly, without jar. No gears are in action when running ahead and on the reverse no gears rotate faster than engine speed.

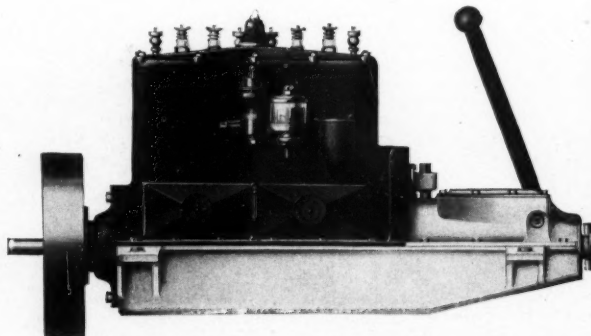
A request addressed to the Wisconsin Motor Mfg. Co., Station A, Department 127, Milwaukee, Wisconsin, U. S. A., will bring their new catalogue, with illustrations, drawings and specifications of all the different types of motors they manufacture.

Carbo Steel Posts' Representatives

THE Carbo Steel Post Co., 877 Rand McNally Building, Chicago, Illinois, U. S. A., announce that Messrs. Legler & Wilson, 11 Broadway, New York City, will represent them for South Africa and South America.



The "Eye Wink," a 20-foot, V-bottom boat, powered with a 4-cylinder motor, speed 33 miles an hour



This Type "QM" is a new 4-cylinder Wisconsin motor that has many unusual features of merit

ceptacle always in sight. Beneath the mill there is a graduated glass jar into which the coffee falls after it is ground, and as the exact amount can be seen at a glance the operator is not liable to grind more than is needed. For this reason the beans are always freshly ground, an important factor in retaining the full flavor of the coffee. The mill is so constructed that it can easily be taken apart for cleaning. Every part is

the valves and keeps them free from dirt besides making the valve action quieter.

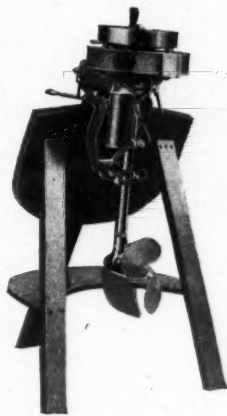
The shaft runs in a straight line from the engine shaft and is rigidly supported on the rear by a large New Departure ball-bearing, which at the same time acts as a thrust bearing. This is a novel construction, the advantages of which will be at once perceived.

Particular attention has been given to the perfect balancing of all reciprocating parts

Mr. Legler will have special charge of South Africa, and Mr. Wilson of South America. The patented "Carbo" lines manufactured by this company are: spring fence posts, poultry yard unit posts, residence yard unit posts, hog yards posts, hog anchors, ornamental street-lighting posts, telephone posts, lightning poles, post hole augers, clothesline posts, hitching and mail box posts and gate hangers.

Rowboat Motors, Gas Power and Equipment

AT a small expenditure a rowboat can be converted into a motorboat, a sailboat can be equipped with auxiliary power, and boating may be made a real pleasure. The device that makes this possible is the Admiral detachable rowboat motor. It is supplied complete, ready to run, and no tools, piping,



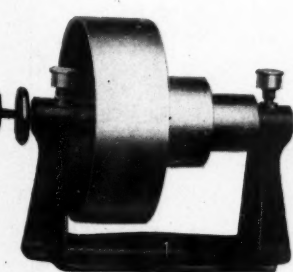
Admiral motor with fly-wheel magneto

bolts, or anything except one's hands and about two minutes time are required to attach it to any rowboat. Then the craft is ready for a spin at the rate of six or eight miles an hour.

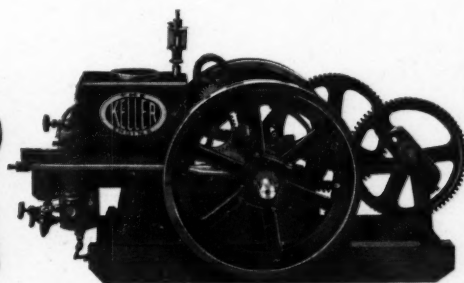
Motors are furnished with either magneto or battery equipment. A muffler of the usual pattern is also furnished regularly, but an underwater exhaust will be supplied without extra charge if it is specified. The Admiral rowboat motor can be attached without defacing the boat in the least. It can be applied to a rented boat and removed when the trip is over. All motors are fitted for salt water.

The motor is reversible, whether equipped with batteries or magneto, and has a 3-inch cylinder with proper ports and high crank case compression, which eliminates back-firing. It has a wide range of speed and de-

velops 2½ horsepower. The crank case is of aluminum, the flywheel perfectly balanced, the gasoline tank extra well supported with a protective bracket and equipped with drain and cutoff so that the adjustment of the carburetor is not interrupted when starting or stopping. The propeller wheel is of the weedless type, 9 inches in diameter; the rudder of heavy cast brass. The total net weight is 55 pounds and the shipping weight 125 pounds.



A Harris governor pulley



Keller engine with high tension magneto, pump Jack attached, for kerosene or petrol

increase the efficiency of workers in such places as factories, commercial establishments, etc., as well as appreciably raising the standards of health.

This is only one of the many interesting and fast selling products of the Affiliated Manufacturers Company, Milwaukee, Wis-

Sanitary Drinking Fountains

IT is said that it is possible for one drinking cup—when used by a number of persons—to spread more disease in an hour than a board of health can eradicate in a year. The germs that are disseminated are particularly insidious because their presence is not apparent to the sight, taste or smell and give no immediate indication of the harm they do.

The first agitation for the abolition of the use of the common drinking cup was begun by people interested in the anti-tuberculosis movement. This resulted in further observation and research which led to the conclusion that other contagions were also transmitted in that way, and that the most prolific fields of infection were railway trains, mills, factories, schools, theaters and other places where many persons assembled. Microscopic tests disclosed millions of bacteria around the edges of drinking cups that had been used by a number of persons throughout a period of days or weeks.

In the United States, the State of Kansas was the first to prohibit by legislative enactment the use of the common drinking cup. In the last six years 36 States and 51 of the principal cities of America have taken similar action, making non-compliance with the law punishable by fine or imprisonment.

As a consequence, a vast and widespread demand has arisen for a satisfactory and inexpensive method of meeting the sanitary requirements that had been established. One of the most efficient means has been found to be what is called "the bubbling fountain." It is always clean, the water is always fresh and there is little or no waste. Drinking fountains of this type have been installed in great numbers all over the United States and everywhere have given satisfaction. Not only are they hygienic, but the cool refreshment that they furnish has been found to

leave a good, strong sod. The mower, however, should be selected with care. Some styles, particularly the older patterns, catch the top of the grass first, pull and break the feeders at the root, and kill the grass as well as the weeds.

A Lawn Mower on a New Principle

WEEDS will kill the grass in any lawn unless they are cut before the seed tops begin to mature. A lawn mower of the proper type, used at regular intervals, will drive the weeds from a lawn in a single season and



A lawn mower that kills weeds as well as cuts grass—with cutters in front of wheels

The Clipper mower, however, does not touch the grass until it cuts it. It has a blade like that in the horse-drawn mowing machine. The cutter bar is directly in front of the wheels. The wheels travel over the ground where the grass has been cut—they never roll down the standing grass as do some of the other types of mowers. By the gauge wheels at the sides of the Clipper mower the height at which the grass is to be cut can be regulated with great accuracy. The knives can be sharpened in the machine with a small file or whetstone, or they can be taken out and ground, but always on the beveled side.

These mowers come in four widths of cut: 12, 15, 18 and 21 inches. The "Pony" mower has a cutter bar 24 inches long. The Clipper Lawn Mower is made by the Clipper Lawn Mower Co., Dixon, Illinois, U. S. A. They state that they have sold their machines in every country in the world, even in Iceland and Alaska. A large number of these mowers are in use in South America and South Africa. A descriptive catalogue will be sent on request. Agents are desired in places where none have been established, and the manufacturers will be glad to hear from responsible persons or firms in this regard.

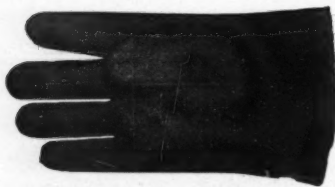
Acid-Proof Gloves

LOVES that are made for their especial needs have become a necessity for workers in almost every industry. The manufacture of such hand coverings has attained large proportions in the United States owing to the unusual variety and extent of the products. While there are gloves that are suited exactly for one particular employment, there are others that are adapted to a wide range of uses. They are not only proof against the ordinary wear and tear of rough work, but they are adequate protection against even violent corrosives that sear the bare hand like fire.

One notable variety of this general purpose glove that resists acids is called the "Pro-Tect-O Brand." It is a cravenette

glove with an imitation leather cuff. It is made of strong drill, with a rubber center and is cravenetted for wear in handling acids, iron, milk cans, rough goods, etc. It protects the hands against contact, and is said to excel any other glove for use of this kind.

The manufacturers are the Cravenette Glove & Mfg. Co., 253 Lafayette Boulevard.



A glove for handling acids, iron and rough goods

Detroit, Michigan, U. S. A. They are making a special export offer on these gloves: \$36 a gross, or \$4 a dozen, less a discount of 20 per cent., f.o.b. New York, packed for export.

Ice-Making Plants

THE Vilter Mfg. Co., No. 754-794 Clinton Street, Milwaukee, Wis., U. S. A., one of the largest manufacturers of ice-making and refrigerating machinery in the United States, have recently installed in Santa Cruz de Tenerife, Canary Islands, a plant having a capacity of 1,250 kilos of ice in 24 hours.

Co. state that in this model they have embodied all the improvements and characteristic features of their large machines, and that without exception the plants installed have been profitable investments for their owners.

Besides the above-mentioned types of machines, this company builds horizontal double-acting machines of any capacity and for all uses, a good many of which are in use all over the world. Upon request the Vilter Mfg. Co. will be pleased to forward their bulletin H. 16 and particulars, or if complete data are furnished regarding the plant it is desired to install, they will submit an estimate covering the machinery required in each individual case.

Learning Languages on the Talking Machine

SOME persons are content with knowing their native language only, but the knowledge of other languages is a great advantage not only in commercial but in social life, and it also gives practical results and satisfaction while traveling.

Up to a comparatively recent date, the study of a foreign language was a tedious and disagreeable undertaking. Students were overwhelmed with grammatical rules and long lists of words and examples which were of little practical use, as no attention was given to daily conversations and phrases in constant use.

In studying a language, the principal object is to learn how to speak it in order to be able to express oneself clearly on subjects

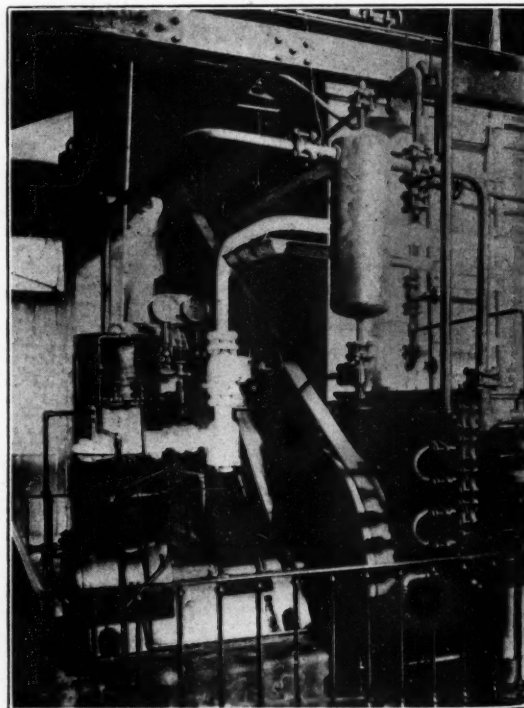
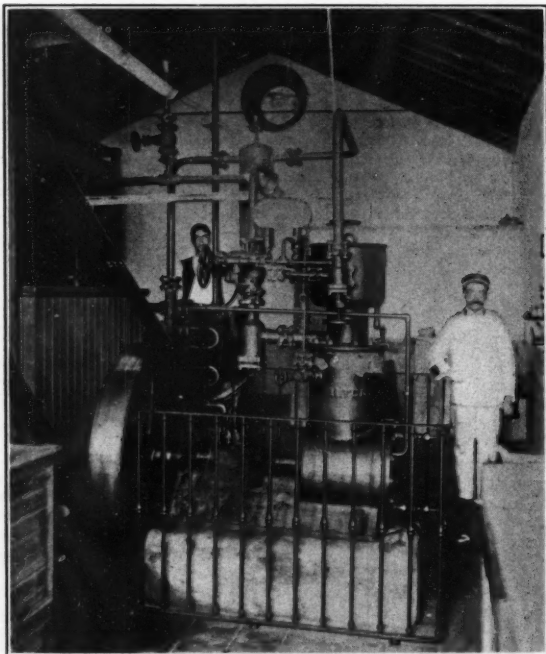
open manual with the printed lesson. All the pupil has to do, is to set the machine in operation and it gives him the correct pronunciation of the words and phrases in the lesson as many times as he may wish.

In whatever language the student undertakes, the accent and pronunciation are per-



Learning a language by the Language Phone Method

fect, the voice is clear and distinct, and the teacher is always on the spot. Each word or phrase can be repeated as many times as may be required until the correct accent has been obtained. The pupil has before him the manual and can note the spelling of each word, learning reading, writing and speaking simultaneously. The sight, the hearing, the speech and the memory are all used



Interior views of an ice-making plant at Santa Cruz de Tenerife, Canary Islands, which was erected by the purchaser simply by following instructions sent him by the manufacturer, the Vilter Mfg. Co.

The proprietor of the plant—the Fabrica de Hielo "Los Alicantinos"—erected same without any assistance whatever, by simply following the instructions which the manufacturers sent him for that purpose. The machinery used in this equipment represents one of the small types built by the above-mentioned company, with capacity of 455 to 2,750 kilos of ice in 24 hours' operation. These equipments may be operated by any kind of mechanical power available. The Vilter Mfg.

of current interest. This is attained best by hearing the language spoken.

With the Language Phone Method of The International College of Languages, one has a constant and untiring professor teaching in a practical manner the accent and pronunciation.

Spanish, French, German and Italian are taught. In studying his lesson, the student places the corresponding disc on the machine, having at the same time, before him, the

at the same time which are obvious advantages and which give practical results.

The disc pronouncing records, which can also be used on Columbia, Victor, Edison or Odeon talking machines, are of the highest quality and made by the same process as grand opera records.

The International College of Languages, 941 Putnam Building, New York City, U. S. A., will send, on request, a free booklet giving complete information.

Quality in Gasoline Motors

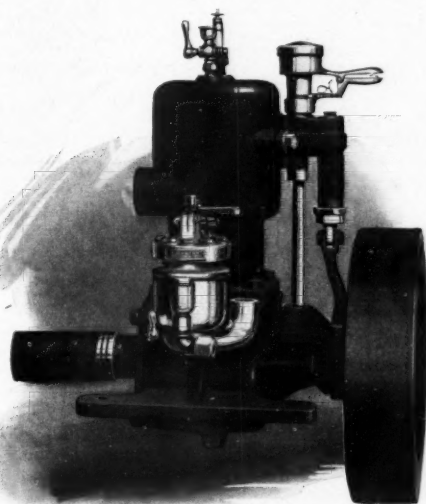
THERE is an old saying that "the best is always the cheapest," and to no class of machinery can it be more truthfully applied than to gasoline motors. Everyone familiar with the gasoline engine knows that the greatest test to which it can be submitted is when it is used in a racing boat, as its employment for this purpose calls for every particle of power that it can develop, frequently under the most unfavorable conditions, and thus causes any weakness either

racing motor that possesses a record of four consecutive successful seasons, and which as yet shows no signs of deterioration. These engines are equipped with a number of improvements to be found in no other make, one of the most notable being an ingenious device that renders "backfiring" impossible. The confidence in which these engines are held by their makers is shown by the fact that a binding guarantee is given for five years against all defects in material or workmanship.

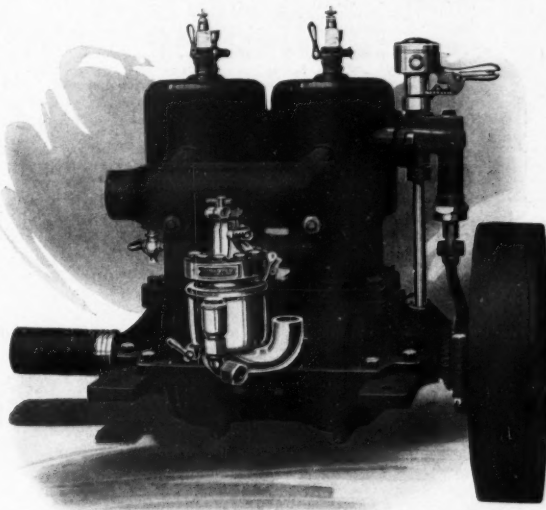
Those desiring to know more about a

30, 1914, were nearly \$2,000,000 greater than at any previous time since the bank was established.

The number of individual deposit accounts, on December 31, 1914, was 45,269, as against 39,731 the previous year, an increase of 13.94 per cent. Deposits in the Savings Department increased 1.21 per cent. in volume, and 8.05 per cent. in the number of accounts, as compared with 1913. Amounts handled by the collection department in 1914 aggregated \$233,000,000. The turnover of the exchange department reached a total of \$303,-



A Roberts motor, model O, 3 horsepower, 3 1/2 bore, 3 inch stroke, that is priced at \$80



This model 2-O motor has the same bore and stroke as the other, but is 6 horsepower

in construction or design to be immediately revealed. This is the reason why so many races are decided by the winning boat's ability to withstand the strain to which its power plant is subjected, and no one interested in power boat racing needs to have his attention called to the frequency with which engine troubles caused by the development of some weak spot have resulted in the loss of the race.

It therefore follows that when a motor has been in racing service for four successive seasons, and in the fourth season winning over craft equipped with several times its power, that motor has given a very convincing demonstration of its quality. Now, while comparatively few boat owners have racing boats, it is well known that no single factor has had a more important bearing on simplifying the design, strengthening and perfecting construction and improving the quality of the materials than the competitive tests possible only through racing, this statement being true both as to the automobile engine as well as the marine motor.

While the American manufacturers, one of whose motors made the enviable record above referred to, have always appreciated the value of the experience gained through the success of their engines in racing boats, they have really paid most attention to the production of motors for use for ordinary purposes, and their line ranges from a 3-horsepower motor suitable for a small launch to a powerful 200-horsepower plant. Their engines of 100 and 200-horsepower are, however, designed for lightweight hydroplanes and for aeroplanes. Their largest engine for cruiser and work-boat use is their 4-cylinder, 40-horsepower.

These engines are made in a number of different weights and designs, so that it is possible for the company to meet the requirements of any class of boat, including the smallest family launch, the heavy fishing or working boat or cruiser, or the highest speed hydroplane. The same care in the construction of every engine turned out by this concern is given as was incorporated in the

"quality" gasoline motor that will not "backfire" should write to The Roberts Motor Manufacturing Co., 200 Roberts Motor Block, Sandusky, Ohio, U. S. A., for a copy of their catalogue in which complete specifications and descriptions will be found of their entire line.

National Bank of Cuba

THE fourteenth annual report of the Banco Nacional de Cuba (National Bank of Cuba) for the year ending December 31, 1914, shows that that period was a prosperous one for the institution. The evidence of this was the addition of \$200,000 to its surplus, for the first time in the history of the bank. The policy of the bank in taking care of its patrons during the financial stress of the latter half of 1913 brought to it a largely increased business during the first six months of 1914. The deposits on June

128,000, an increase of 8.89 per cent. over 1913. The regular 8 per cent. dividend was paid, and the surplus increased to \$1,500,000, leaving \$160,455.43 in undivided profits after having made unusual provision for bad and doubtful accounts.

In November, 1914, Congress enacted a law establishing the gold dollar as the standard unit of value in Cuba, and providing for the coinage of national gold, silver and nickel coins of the same weight and fineness as the metallic currency of the United States. The contract for effecting the coinage and the retirement of foreign moneys was awarded to this bank.

The head office of the National Bank of Cuba is at Havana. It has five branches in that city, and 30 branches in the principal commercial centers of the Island. The agency in the United States is at No. 1 Wall Street, New York City. The statement of the financial condition of this bank is as follows:

GENERAL BALANCE SHEET—DECEMBER 31, 1914 (United States Currency)

ASSETS			
Cash	\$4,751,090.09		
Due from Banks and Bankers	2,093,336.09		
Remittances in Transit	1,447,755.32		\$8,292,181.50
BONDS AND STOCKS:			
Government Bonds	\$2,618,831.97		
City of Havana Bonds	727,769.42		
Other Bonds	605,659.31		
Stocks	103,489.13		4,055,749.83
Loans, Discounts, Time Bills, etc.			18,492,260.65
Bank Buildings and Real Estate			1,446,756.07
Furniture and Fixtures			89,198.57
Sundry Accounts			277,409.10
Securities on deposit			5,189,630.15
TOTAL			\$37,843,155.87
LIABILITIES			
Capital	\$5,000,000.00		
Surplus	1,500,000.00		
Undivided Profits	360,455.43		\$6,860,455.43
Deposits			23,713,573.06
Due to Banks and Bankers			2,079,497.23
Deposits (Securities)			5,189,630.15
TOTAL			\$37,843,155.87

Dividend payable January 2, 1915.

*Deduct \$200,000—four per cent semi-annual

Please mention DUN'S REVIEW when writing to Advertisers, and give ADDRESS IN FULL, including Province and Country.

THE KALAMAZOO VEGETABLE PARCHMENT CO.

Are the Largest Manufacturers in the World of Pure, Genuine Parchment Paper extensively used by the Butter, Meat and Biscuit Trade for wrapping Dairy Products, Meats and all Greasy Food Products.

ALSO MANUFACTURERS OF WAX PAPER

largely used for wrapping Bread, Soap, Candy, and for lining Biscuit and Cracker Boxes. A Few Useful Kalamazoo Household Articles which are Practical, Economical and Convenient:

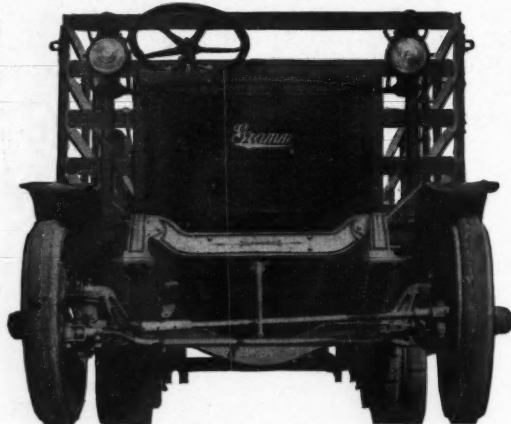
The Kalamazoo Ice Blanket, which saves one-half of the ice bill.
The Kalamazoo Nursery and Maternity Blanket, which is a substitute for rubber sheeting.
The Kalamazoo Household Parchment Paper can be used in a thousand ways in the kitchen and home.
The Kalamazoo Sheet and Lining Paper is non-curling and is used for shelving, etc.
The Kalamazoo Paper Dish Cloth is germ-proof and is used by everyone who believes in sanitation.
The Kalamazoo Stickless Cake Pan Liners will keep cake from sticking to the pan.

We invite inquiries from large, responsible jobbers, and will take pleasure in sending interested firms complete information regarding our attractive line, and such other information as desired.

KALAMAZOO VEGETABLE PARCHMENT CO.
KALAMAZOO, MICHIGAN, U. S. A.

GRAMM MOTOR TRUCKS

"Built in a Canadian factory by engineers employing the best principles of European and American design and construction."



Gramm Motor Truck Co. of Canada, Ltd., Aug. 19, 1913.
Walkerville, Ontario.

Dear Sirs:—The Colombian Oil & Gas Company are using the 5-ton Grammm Truck in the Republic of Colombia. There are no roads except what our company have built, and these cannot be called roads. The truck has given splendid satisfaction under the circumstances and has been doing the work of about eighteen mule teams.

I have known the truck to fall through one of our bridges with a capacity load on and, after being hauled out by mules, to have proceeded on its way.

Under the circumstances, I think I can recommend your trucks to any probable purchaser in South America.

Yours truly,
THE COLOMBIAN OIL & GAS CO. OF CANADA.
BARRANQUILLA, COLOMBIA.

Export catalogs in English and Spanish giving details of 2, 3 and 5-ton trucks. All prices f. o. b. New York, boxed for export.

The Grammm Motor Truck Co. of Canada, Ltd.
Walkerville, Ontario

See-Rite PENCIL POINTER

THE SEE-RITE PENCIL POINTER IS THE BEST PENCIL SHARPENER ON THE MARKET BECAUSE

It is inexpensive. Will last for months. Will not break the lead. Will not waste the pencil. Will not litter the floor. It has an adjustable razor steel blade.



Dull blades can be resharpened at any time. It sharpens pencils of any size. It is convenient for the pocket.

Special Offer to

Agents & Dealers

On receipt of \$1.00 United States currency or its equivalent we will mail, postage prepaid, 10 SEE-RITE pencil pointers. Include 10 cents if to be sent by registered mail. Remittance can be made by International Postal Money Order or Bankers' Draft, or any convenient mode of remittance. EXCEPT POSTAGE STAMPS.

SEARIGHT MFG. CO., 45 Fort St., E., Detroit, Michigan, U. S. A.

ANDALUSIAN PRODUCTS GROSS HERMANOS MALAGA (Spain)

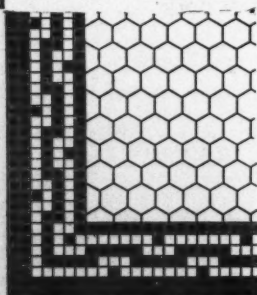
Exporters of all kinds of Fresh and Dried Fruit, Legumes, Wines, Anisettes, Olive Oil, etc., etc.

Connection desired with Importing Houses
WE WANT GOOD AGENTS

Our References: All banks and Consuls in Malaga.

Agents in New York:
MURRAY & ELSINGER, Broadway and Beaver St.

THE MOSAIC TILE CO. OF ZANESVILLE, OHIO MANUFACTURERS OF ALL CLASSES OF TILES



FOR FLOORS AND WALLS

CERAMIC ROMAN MOSAIC
A SPECIALTY

GLAZED WALL TILES IN
WHITE AND COLORS

Special Prices to Dealers on White
Glazed Wall Tiles for
Stock Orders.

Catalogues in English and
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Export Department

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30 W. 24th St., New York, U.S.A.

GARRET & CO. MALAGA (Spain)

Established in 1844

Packers and Exporters of

Pure Olive Oil for Manufacturing Purposes and
Superior Eatable Virgin Olive Oil for Canners

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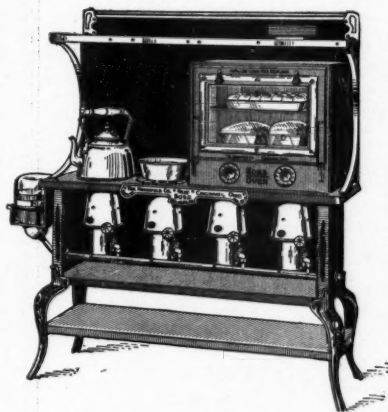
Connections desired with responsible IMPORTERS
and DEALERS in all countries.

Responsible Agents Wanted

First-class References Given and Required.

The Advantages of Glass Door Ovens

THE modern oil-burning cookstove, moderate in cost and economical in operation, owes its development largely to the efforts of American manufacturers. These stoves and the ovens that are a part of their equip-

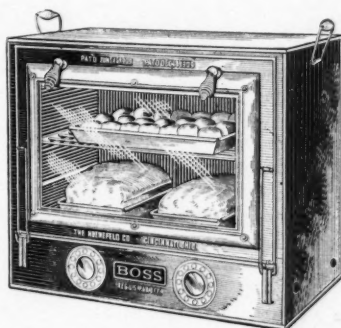


A Boss blue flame oil stove lightens household tasks greatly

ment are now available in so many different styles, sizes and prices that almost any requirement can be met. Wherever they are introduced they grow rapidly in favor because of the exactness with which their heat can be controlled, their fuel economy, and the satisfaction of their use, particularly in warm weather when, with an ordinary range, a kitchen becomes quickly overheated.

For these and many other reasons the oil stove is a boon to the housewife. It has been improved continually in one detail after another until it is now a marvel of simplicity and safety. It is durable and reliable; easy to understand and to operate. It can be lighted in an instant, and the intensity of its heat gives prompt results. The flame can be raised and lowered at will by the turn of a screw, and any amount of heat required can be supplied steadily and in the proper volume.

One of the most striking improvements that has been introduced recently in connection with oil stoves is the oven with a glass door. This sort of oven minimizes guesswork in cooking and baking. The interior of the oven is always in plain view, and the



With a glass door over the cooking is always in plain view

danger of ruining a cake or pie by opening the oven door frequently to see how it is progressing is eliminated.

In the oven in question a patented heat deflector distributes the heat so that the

temperature is the same number of degrees in every part of the oven. In this way the food is evenly cooked on all sides. As it can always be seen through the glass door there is little likelihood of its being burned except through carelessness. These glass door ovens can be used on any gas or oil stove. They are very substantially built and are guaranteed to give good service for many years. They can be "knocked down" for shipment, if desired, which facilitates their transportation to any part of the world. They are so simple to put together that a screwdriver is the only tool required.

Merchants and others desiring further information regarding glass door ovens or oil stoves should address The Huenefeld Company, 100 Spring Street, Cincinnati, Ohio, U. S. A., and request a copy of their catalogue describing their line of "Boss" Glass Door Ovens and "New Boss" Blue Flame Wickless Oil Stoves.

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(Signed) WILLIAM A. CRANE,
Manager.

Sworn to and subscribed before me this 1st day of April, 1915.

PETER R. GATENS,
Notary Public No. 1263,
New York County, N. Y.

(SEAL)

(My commission expires March 30, 1916.)

EMERSON



Model L Farm Tractor

A four-cylinder tractor. 12 drawbar and 20 brake h.p. Light weight—5000 lbs. Suitable for small farms. Reduces the cost and labor of producing crops—makes farming more profitable. Solves the labor problem. In the United States the Emerson Tractor generally plows one acre or more in one hour with two gallons of gasoline.

The Emerson Farm Tractor has two speeds forward and one reverse, both forward speeds geared direct. Transmission runs in enclosed dust-proof, oil-filled case—preventing wear. All working parts readily accessible. Only one drive wheel, one master gear and one master pinion, eliminating differential—resulting in simplicity and easy operation. Will pull practically all farm implements and operate all motor-driven machines.

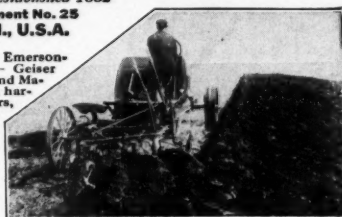
Catalogue, illustrated in colors, and prices sent upon request.

EMERSON-BRANTINGHAM IMPLEMENT COMPANY (Inc.)
Good Farm Machinery—Established 1852

Foreign Department No. 25
Rockford, Ill., U.S.A.

Also manufacturers of Emerson-Brantingham—Reeves—Geiser Agricultural Implements and Machinery, including plows, harrows, planters, cultivators, mowers, rakes, gas engines, threshing machinery, Big Four Tractors, Steam Road Rollers, Hay Presses, Sawmills, Traction Engines, Corn Shellers, Wagons, Carriages.

2194



The Fame of the

Steinway

the Piano by which all others are measured and judged, is not merely a local or national one. It is international, universal, world-wide, and is the recognition, in the strongest possible manner, of a work of art that is in its line unequalled and unrivalled.

From its inception the Steinway Piano has been known as THE BEST PIANO, without qualification and without limitation.

Prices range from \$500 to \$1600 in American gold, f. o. b. New York

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107-109 East 14th Street, New York

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AND ALL-THE-YEAR VACATION GROUND

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